

**UNDERGROUND INJECTION CONTROL
PERMIT APPLICATION**

**Ute Tribal # 20-07
1980' FNL & 1980' FEL
Sec. 20, T5S-R3W
Duchesne County, Utah
API # 43-013-30882**

July 2015

Prepared for:
Bruce Suchomel
Groundwater Program, Mail Code 8P-W-UIC
U.S. Environmental Protection Agency
1595 Wynkoop St
Denver, CO 80202-1129

Prepared by:
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Boise, Idaho 83707
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LIST OF ATTACHMENTS

- Attachment No. 1 Area Topography Map
- Attachment No. 2 Site Map
- Attachment No. 3 Map of the A-Marker surface
- Attachment No. 4 Cross-Sections of the injection formation
- Attachment No. 5 Water Analysis
- Attachment No. 6 Completion data for all wells in the AOR
- Attachment No. 7 CBL for the UIC well
- Attachment No. 8 Open hole log for the UIC well
- Attachment No. 9 List of owners and Affidavit Notification
- Attachment No. 10 Well bore diagrams for the UIC well
- Attachment No. 11 P&A procedure
- Attachment No. 12 MIT procedure
- Attachment No. 13 Surety Bond letter

SUMMARY DOCUMENT
UIC WELL APPLICATION
Ute Tribal 20-07
API # 43-013-30882

The following document contains information provided in support of the application for the conversion of the Ute Tribal 20-07 well to an injection well in the Green River formation in the Antelope Creek Field in Duchesne County, Utah.

The Antelope Creek Field falls within the Uintah and Ouray Indian reservations and is within Indian Country; therefore, for facilities located on the reservation, only EPA-issued UIC permits are necessary for compliance with UIC regulations.

The EPA has issued an Area Permit #UT20736-00000 for the Underground Injection Control for the Antelope Creek Field. This area permit allows for additional producing wells to be converted to injection wells for enhanced recovery.

- (1) Petroglyph Energy, Inc. (Petroglyph) is the operator and only working interest owner of wells located in the Antelope creek Field, Duchesne County, Utah. Petroglyph's business address is provided below:

Petroglyph Energy, Inc.
960 Broadway Avenue, Suite 500
P.O. Box 70019
Boise, ID 83707

- (2) Enclosed as Attachment No. 1 is a topographic map of a portion of the Antelope Creek Field, identifying all wells located in this area. The legal location for the Ute Tribal 20-07 is 1980' FNL & 1980' FEL SW/NE Sec. 20, T5S-R3W.
- (3) Attachment No. 2 is a map of the well. This map shows a circle with a ¼ mile radius centered on the Ute Tribal 20-07 well. The ¼ mile radius encompasses the area of review, AOR, within which Petroglyph is required to investigate all wells for mechanical integrity. The ¼ mile radius also identifies mineral ownership; all lands within the AOR are leased to Petroglyph by the Ute Tribe as indicated by yellow shading. The AOR has Ute Tribal 20-06, Ute Tribal 20-08, and Ute Tribal 20-10 well(s) located in its ¼ mile radius.

- (4) Petroglyph proposes to utilize the Ute Tribal 20-07 as an injection well for enhanced recovery in the Antelope Creek Field.
- (5) Injection Zone – The injection intervals are between 4058' and 6042' True Vertical Depth and located in the lower portion of the Green River Formation. The injection zone is confined within a 1984' section between the Green River "A" Lime marker bed and the top of the Basal Carbonate in the lower part of the formation. The injection zone is composed of lenticular calcareous sandstones interbedded with low permeable carbonates and calcareous shales. The lenticular sandstones vary in thickness from 1 to 30 feet.

Confining Zone – The overall confining strata above the injection zone consists of impermeable Green River calcareous shales and continuous beds of microcrystalline dolostone. The confining zone in the Ute Tribal 20-07 is 230 feet thick.

Attachment No. 3 is a structure map of the A-Marker surface.

Attachment No. 4 is a cross-section of the injection interval and confining zone.

- (6) Enclosed as Attachment No. 5 are standard analyses of produced water from three batteries that currently serve as central handling facilities for all project producing wells. The analysis of the Green River formation water from the Ute Tribal 18-08 Satellite Battery is 12805 mg/L of total dissolved solids (TDS), Ute Tribal 21-11 Satellite Battery is 15659 mg/L TDS, and Ute Tribal 34-12-D3 Satellite Battery is 14590 mg/L TDS.

Injectate in the field is a mixture of produced water and fresh make-up water. The nearest injection well is the Ute Tribal 19-09, the most recent analysis of the water being injected into the Green River formation at this location is 10130 mg/L TDS. This analysis is also included in Attachment No. 5.

- (7) A summary of completion data from the Ute Tribal 20-07 and offset wells in the AOR are included in Attachment No. 6
- (8) The cement bond log is included in Attachment No. 7.
- (9) The open hole log for the Ute Tribal 20-07 is included in Attachment No. 8.

- (10) The Antelope Creek Field is operated under a Cooperative Plan of Development between the Ute Tribe and Petroglyph Energy. At the Ute Tribal 20-07 location, all mineral owners, surface owners and operators located within the AOR ¼ mile radius have been notified of the submitted EPA application to convert to injection. Attachment No. 9 is the Affidavit of Notification to all owners.

- (11) Petroglyph requests a maximum surface injection pressure of **1900psi**. The EPA Area Permit No. UT20736-00000 uses the formula:

$$P_m = (0.88 \text{psi}/\text{ft} - 0.43 \text{psi}/\text{ft}(S_g)) D$$

Where:

P_m = Maximum surface injection pressure

0.88psi/ft = Fracture gradient

D = Top perforation depth

0.43psi/ft = Hydrostatic pressure/hydraulic head

S_g = Specific gravity of injection fluid

For the Ute Tribal 20-07:

$$1999 \text{psi} = (0.88 \text{psi}/\text{ft} - 0.43(1.00)) 4442 \text{ft}$$

EPA Area Permit No. 20736-00000 further caps maximum surface pressure at 1900psi.

- (12) Three wellbore diagrams for the Ute Tribal 20-07 are in Attachment No. 10. One diagram is for production, one for injection, and one for Plug & Abandonment (P&A).

- (13) The P&A procedure for this well is shown in Attachment No. 11.

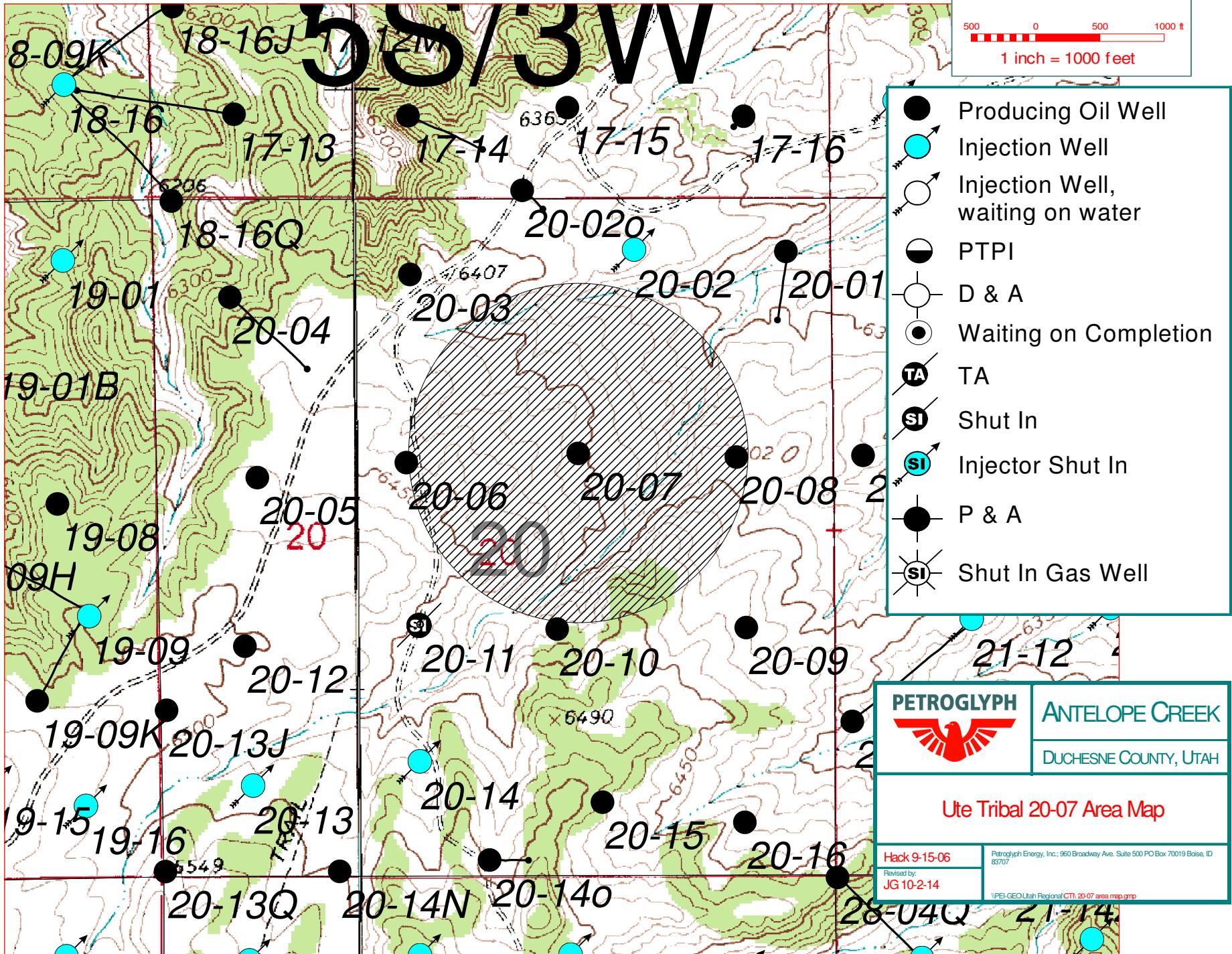
- (14) Once the draft permit is issued, Petroglyph will conduct a Mechanical Integrity Test and a static bottom-hole pressure test. The MIT procedure is contained in Attachment No. 12. The conversion work will be satisfactorily completed and submitted to the EPA on Form 7520-12. A wellbore schematic will be included with this form.

- (15) Petroglyph will give proof of financial responsibility by posting a surety bond for the UIC well prior to final permit approval. A copy of this letter is contained in Attachment No. 13.
- (16) Petroglyph will install various gauges on the well so that the injection pressure and tubing/casing annulus pressure can be monitored. The well will be equipped with a flow meter with a cumulative volume recorder.

ATTACHMENT NO. 1

AREA MAP

ATTACHMENT NO. 1:
AREA MAP



ATTACHMENT NO. 2

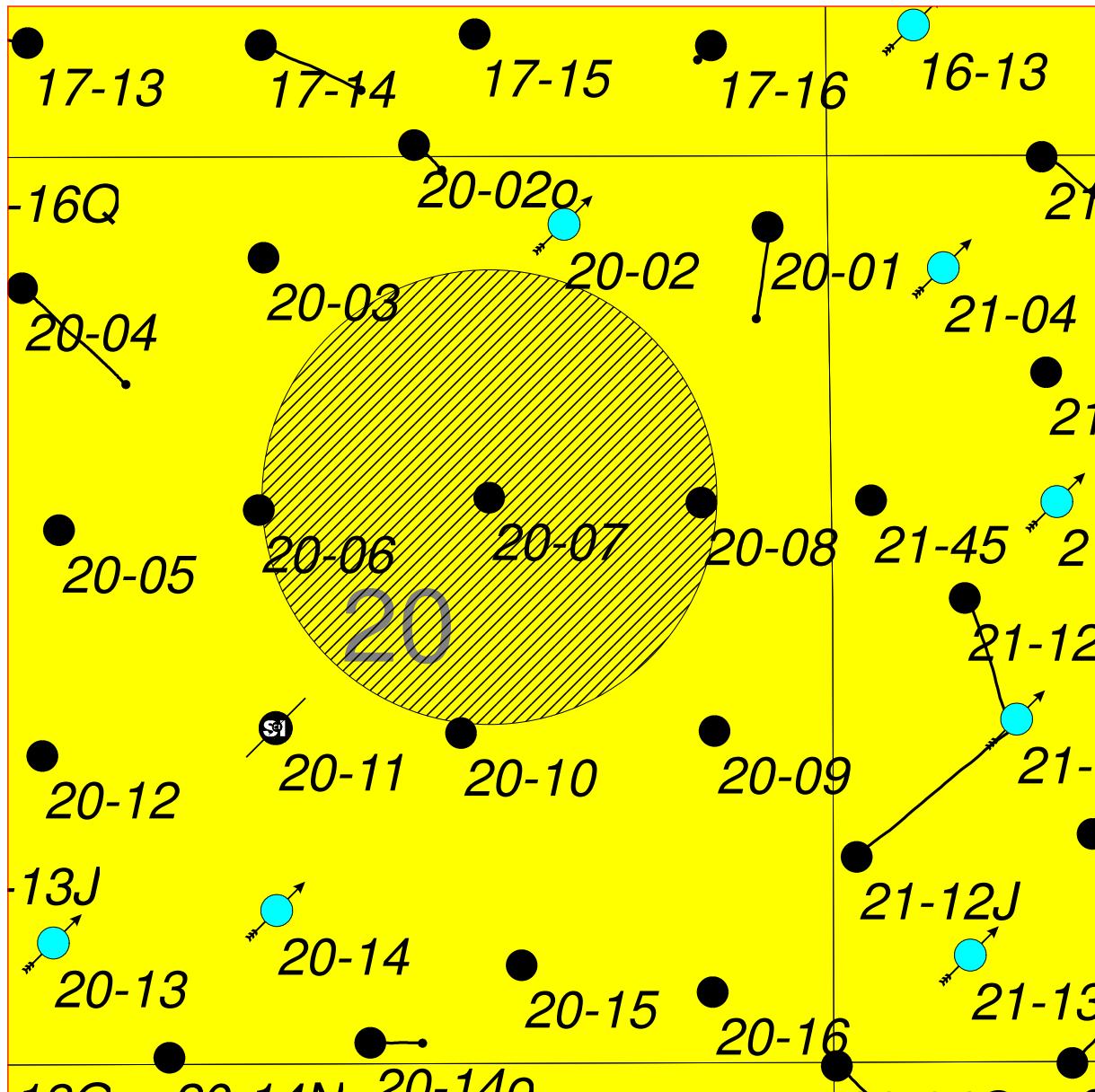
SITE MAP

RADIUS MAP OF ADJACENT WELLS

ATTACHMENT NO. 2:
SITE MAP

1:12000

500 0 500 1000 ft
1 inch = 1000 feet



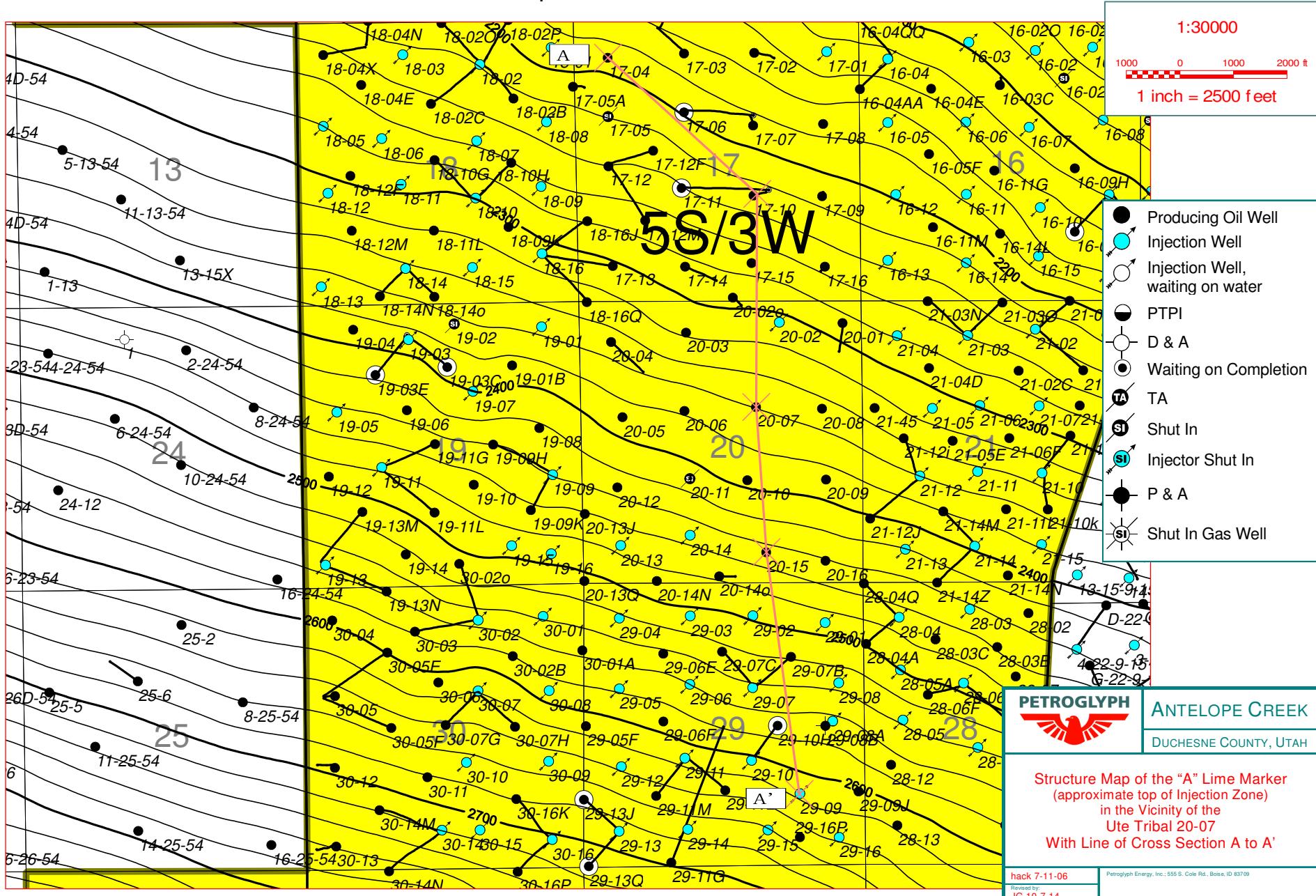
- Producing Oil Well
- Injection Well
- Injection Well, waiting on water
- PTPI
- D & A
- Waiting on Completion
- TA
- Shut In
- Injector Shut In
- P & A
- Shut In Gas Well



ATTACHMENT NO. 3

MAP OF THE A-LIME MARKER SURFACE

ATTACHMENT NO. 3:
Map of the "A" Lime Marker

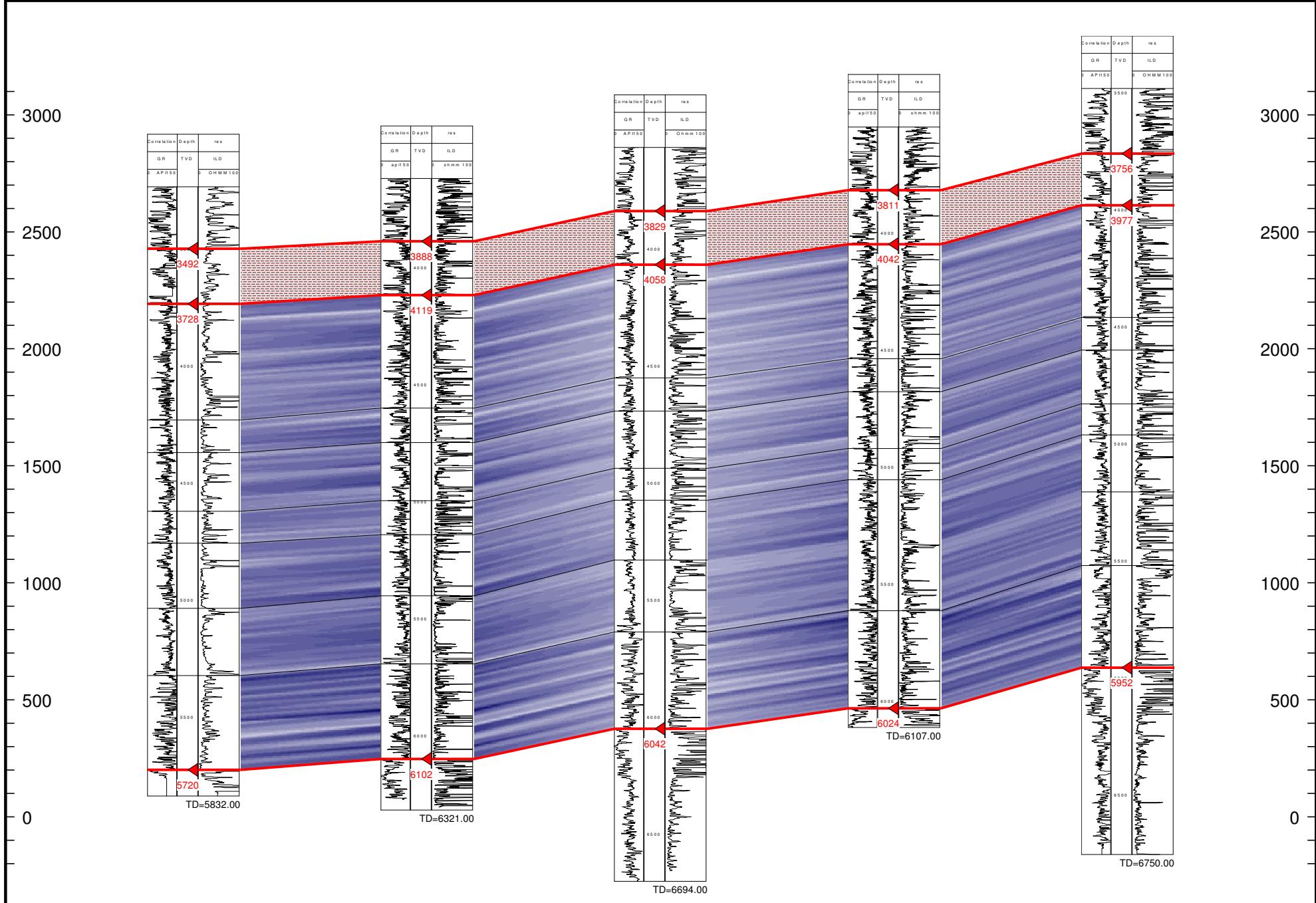


ATTACHMENT NO. 4

CROSS SECTIONS OF THE INJECTION FORMATION

Structural Cross Section A to A' in the Vicinity of Ute Tribal 20-07

43013314640000 3781 ft 43013515220000 3979 ft 43013308820000 2720 ft 43013340510000 4564 ft 43013307630000
 PETROGLYPH OPERATING COMPANY INC
 UTE TRIBAL 17-04 UTE TRIBAL 17-10 UTE TRIBAL 20-07 UTE TRIBAL 20-15 Ute Tribal 29-09
 697 FNL 636 FWL 2036 FSL 1751 FEL 1980 FNL 1980 FEL 574 FSL 1806 FEL 1324 FSL 1160 FEL
 TWP: 5 S - Range: 3 W - Sec. 17 TWP: 5 S - Range: 3 W - Sec. 17 TWP: 5 S - Range: 3 W - Sec. 20 TWP: 5 S - Range: 3 W - Sec. 20 TWP: 5S - Range: 3W - Sec. 29



ATTACHMENT NO. 5

WATER ANALYSIS

Water Analysis Report

Production Company: PETROGLYPH OPERATING CO INC - EBUS
 Well Name: UTE TRIBAL 18-08 SATELLITE, DUCHESN
 Sample Point: PLANT DISCHARGE COMPLETE
 Sample Date: 4/21/2015
 Sample ID: WA-307075

Sales Rep: James Patry
 Lab Tech: Gary Winegar

Scaling potential predicted using ScaleSoftPitzer from
 Brine Chemistry Consortium (Rice University)

Sample Specifics	
Test Date:	4/21/2015
System Temperature 1 (°F):	60.00
System Pressure 1 (psig):	14.70
System Temperature 2 (°F):	180.00
System Pressure 2 (psig):	2000.00
Calculated Density (g/ml):	1.0061
pH:	8.50
Calculated TDS (mg/L):	12805.08
CO ₂ in Gas (%):	
Dissolved CO ₂ (mg/L):	0.00
H ₂ S in Gas (%):	
H ₂ S in Water (mg/L):	0.00

Analysis @ Properties in Sample Specifics			
Cations	mg/L	Anions	mg/L
Sodium (Na):	4541.75	Chloride (Cl):	6000.00
Potassium (K):	41.78	Sulfate (SO ₄):	163.00
Magnesium (Mg):	28.63	Bicarbonate (HCO ₃):	1952.00
Calcium (Ca):	67.44	Carbonate (CO ₃):	
Strontium (Sr):	5.41	Acetic Acid (CH ₃ COO):	
Barium (Ba):	0.90	Propionic Acid (C ₂ H ₅ COO):	
Iron (Fe):	2.74	Butanoic Acid (C ₃ H ₇ COO):	
Zinc (Zn):	1.29	Isobutyric Acid ((CH ₃) ₂ CHCOO):	
Lead (Pb):	0.05	Fluoride (F):	
Ammonia NH ₃ :		Bromine (Br):	
Manganese (Mn):	0.09	Silica (SiO ₂):	

Notes:

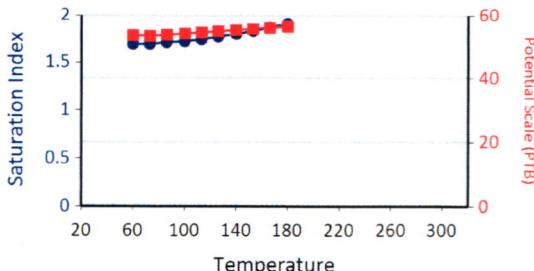
(PTB = Pounds per Thousand Barrels)

Temp (°F)	PSI	Calcium Carbonate		Barium Sulfate		Iron Sulfide		Iron Carbonate		Gypsum CaSO ₄ ·2H ₂ O		Celestite SrSO ₄		Halite NaCl		Zinc Sulfide	
		SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB
180	2000	1.91	56.41	0.09	0.09	0.00	0.00	2.59	1.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
166	1779	1.87	56.05	0.13	0.14	0.00	0.00	2.54	1.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
153	1558	1.83	55.66	0.19	0.19	0.00	0.00	2.49	1.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
140	1338	1.80	55.27	0.26	0.24	0.00	0.00	2.44	1.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
126	1117	1.77	54.86	0.33	0.29	0.00	0.00	2.38	1.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
113	897	1.74	54.46	0.42	0.33	0.00	0.00	2.32	1.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100	676	1.72	54.08	0.52	0.38	0.00	0.00	2.26	1.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
86	455	1.71	53.72	0.64	0.41	0.00	0.00	2.20	1.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
73	235	1.69	53.39	0.77	0.45	0.00	0.00	2.14	1.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
60	14	1.69	53.56	0.92	0.47	0.00	0.00	2.08	1.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

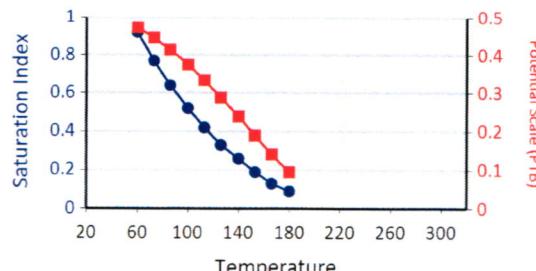
Temp (°F)	PSI	Hemihydrate CaSO ₄ ·0.5H ₂ O		Anhydrate CaSO ₄		Calcium Fluoride		Zinc Carbonate		Lead Sulfide		Mg Silicate		Ca Mg Silicate		Fe Silicate	
		SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB
180	2000	0.00	0.00	0.00	0.00	0.00	0.00	2.20	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
166	1779	0.00	0.00	0.00	0.00	0.00	0.00	2.09	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
153	1558	0.00	0.00	0.00	0.00	0.00	0.00	1.96	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
140	1338	0.00	0.00	0.00	0.00	0.00	0.00	1.83	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
126	1117	0.00	0.00	0.00	0.00	0.00	0.00	1.69	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
113	897	0.00	0.00	0.00	0.00	0.00	0.00	1.53	0.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100	676	0.00	0.00	0.00	0.00	0.00	0.00	1.37	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
86	455	0.00	0.00	0.00	0.00	0.00	0.00	1.19	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
73	235	0.00	0.00	0.00	0.00	0.00	0.00	1.01	0.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
60	14	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Water Analysis Report

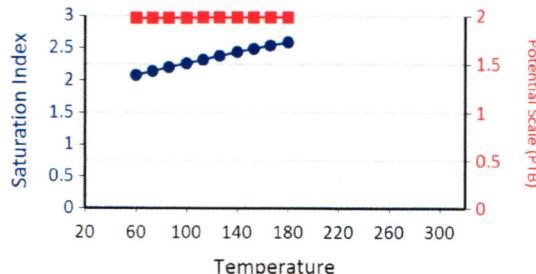
Calcium Carbonate



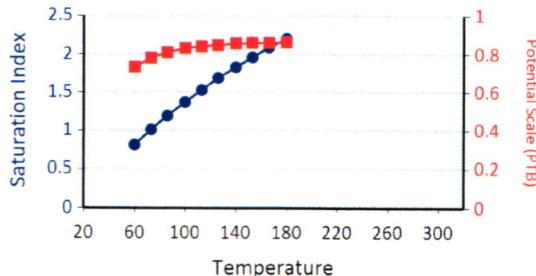
Barium Sulfate



Iron Carbonate



Zinc Carbonate



Water Analysis Report

Production Company: PETROGLYPH OPERATING CO INC - EBUS
 Well Name: UTE TRIBAL 21-11 SATELLITE, DUCHESNE
 Sample Point: PLANT DISCHARGE COMPLETE
 Sample Date: 4/21/2015
 Sample ID: WA-307071

Sales Rep: James Patry
 Lab Tech: Gary Winegar

Scaling potential predicted using ScaleSoftPitzer from
 Brine Chemistry Consortium (Rice University)

Sample Specifics		Analysis @ Properties in Sample Specifics											
Test Date:	4/21/2015	Cations					mg/L		Anions				
System Temperature 1 (°F):	60.00	Sodium (Na):					5585.76		Chloride (Cl):			7000.00	
System Pressure 1 (psig):	14.70	Potassium (K):					55.43		Sulfate (SO ₄):			277.00	
System Temperature 2 (°F):	180.00	Magnesium (Mg):					10.62		Bicarbonate (HCO ₃):			2684.00	
System Pressure 2 (psig):	2000.00	Calcium (Ca):					30.52		Carbonate (CO ₃):				
Calculated Density (g/ml):	1.0081	Strontium (Sr):					6.47		Acetic Acid (CH ₃ COO):				
pH:	8.70	Barium (Ba):					1.02		Propionic Acid (C ₃ H ₅ COO):				
Calculated TDS (mg/L):	15659.01	Iron (Fe):					1.09		Butanoic Acid (C ₃ H ₇ COO):				
CO ₂ in Gas (%):		Zinc (Zn):					6.88		Isobutyric Acid ((CH ₃) ₂ CHCOO):				
Dissolved CO ₂ (mg/L):	0.00	Lead (Pb):					0.08		Fluoride (F):				
H ₂ S in Gas (%):		Ammonia NH ₃ :							Bromine (Br):				
H ₂ S in Water (mg/L):	35.00	Manganese (Mn):					0.14		Silica (SiO ₂):				

Notes:

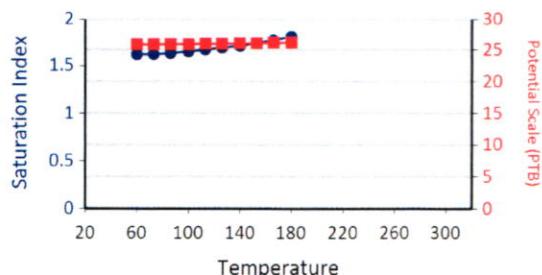
(PTB = Pounds per Thousand Barrels)

Calcium Carbonate				Barium Sulfate		Iron Sulfide		Iron Carbonate		Gypsum CaSO ₄ -2H ₂ O		Celestite SrSO ₄		Halite NaCl		Zinc Sulfide	
Temp (°F)	PSI	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB
180	2000	1.81	26.18	0.28	0.29	3.60	0.60	2.44	0.79	0.00	0.00	0.00	0.00	0.00	0.00	11.37	3.59
166	1779	1.77	26.13	0.33	0.32	3.61	0.60	2.40	0.79	0.00	0.00	0.00	0.00	0.00	0.00	11.52	3.59
153	1558	1.74	26.09	0.39	0.36	3.63	0.60	2.35	0.79	0.00	0.00	0.00	0.00	0.00	0.00	11.68	3.59
140	1338	1.71	26.05	0.45	0.39	3.67	0.60	2.30	0.79	0.00	0.00	0.00	0.00	0.00	0.00	11.86	3.59
126	1117	1.69	26.00	0.53	0.43	3.72	0.60	2.25	0.79	0.00	0.00	0.00	0.00	0.00	0.00	12.05	3.59
113	897	1.67	25.97	0.62	0.46	3.79	0.60	2.20	0.79	0.00	0.00	0.00	0.00	0.00	0.00	12.27	3.59
100	676	1.65	25.93	0.72	0.49	3.87	0.60	2.14	0.79	0.00	0.00	0.00	0.00	0.00	0.00	12.50	3.59
86	455	1.63	25.91	0.84	0.52	3.97	0.60	2.08	0.79	0.00	0.00	0.00	0.00	0.00	0.00	12.76	3.59
73	235	1.62	25.88	0.97	0.54	4.09	0.60	2.02	0.79	0.00	0.00	0.00	0.00	0.00	0.00	13.04	3.59
60	14	1.62	25.87	1.12	0.56	4.23	0.60	1.96	0.79	0.00	0.00	0.00	0.00	0.00	0.00	13.34	3.59

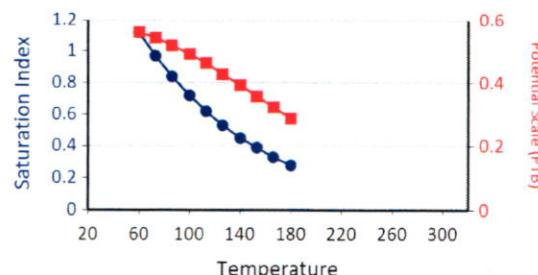
Hemihydrate CaSO ₄ *0.5H ₂ O				Anhydrate CaSO ₄		Calcium Fluoride		Zinc Carbonate		Lead Sulfide		Mg Silicate		Ca Mg Silicate		Fe Silicate	
Temp (°F)	PSI	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB
180	2000	0.00	0.00	0.00	0.00	0.00	0.00	3.15	4.62	10.72	0.03	0.00	0.00	0.00	0.00	0.00	0.00
166	1779	0.00	0.00	0.00	0.00	0.00	0.00	3.04	4.62	10.97	0.03	0.00	0.00	0.00	0.00	0.00	0.00
153	1558	0.00	0.00	0.00	0.00	0.00	0.00	2.92	4.62	11.24	0.03	0.00	0.00	0.00	0.00	0.00	0.00
140	1338	0.00	0.00	0.00	0.00	0.00	0.00	2.79	4.62	11.54	0.03	0.00	0.00	0.00	0.00	0.00	0.00
126	1117	0.00	0.00	0.00	0.00	0.00	0.00	2.65	4.62	11.86	0.03	0.00	0.00	0.00	0.00	0.00	0.00
113	897	0.00	0.00	0.00	0.00	0.00	0.00	2.50	4.61	12.21	0.03	0.00	0.00	0.00	0.00	0.00	0.00
100	676	0.00	0.00	0.00	0.00	0.00	0.00	2.34	4.61	12.60	0.03	0.00	0.00	0.00	0.00	0.00	0.00
86	455	0.00	0.00	0.00	0.00	0.00	0.00	2.17	4.60	13.01	0.03	0.00	0.00	0.00	0.00	0.00	0.00
73	235	0.00	0.00	0.00	0.00	0.00	0.00	1.99	4.58	13.46	0.03	0.00	0.00	0.00	0.00	0.00	0.00
60	14	0.00	0.00	0.00	0.00	0.00	0.00	1.79	4.55	13.95	0.03	0.00	0.00	0.00	0.00	0.00	0.00

Water Analysis Report

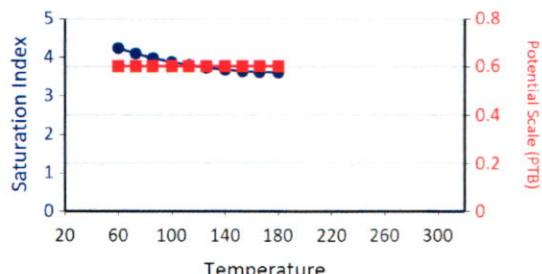
Calcium Carbonate



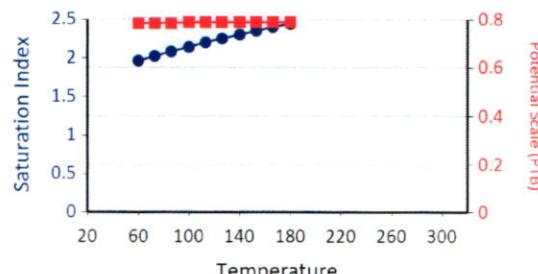
Barium Sulfate



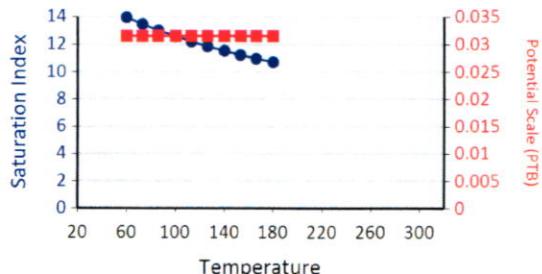
Iron Sulfide



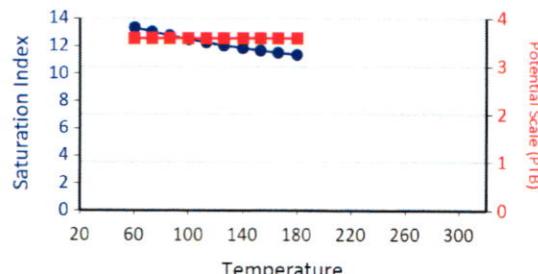
Iron Carbonate



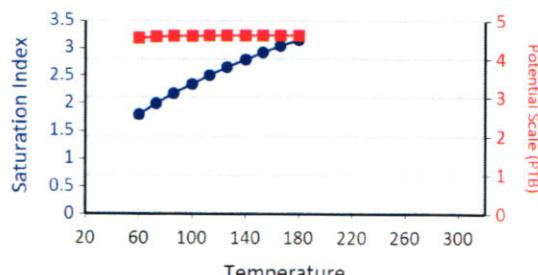
Lead Sulfide



Zinc Sulfide



Zinc Carbonate



Water Analysis Report

Production Company: PETROGLYPH OPERATING CO INC - EBUS
 Well Name: UTE TRIBAL 34-12D3 SATELLITE, DUCHE
 Sample Point: PLANT DISCHARGE
 Sample Date: 4/21/2015
 Sample ID: WA-307067

Sales Rep: James Patry
 Lab Tech: Gary Winegar

Scaling potential predicted using ScaleSoftPitzer from
 Brine Chemistry Consortium (Rice University)

Sample Specifics	
Test Date:	4/21/2015
System Temperature 1 (°F):	60.00
System Pressure 1 (psig):	14.70
System Temperature 2 (°F):	180.00
System Pressure 2 (psig):	2000.00
Calculated Density (g/ml):	1.0073
pH:	8.50
Calculated TDS (mg/L):	14589.98
CO2 in Gas (%):	
Dissolved CO2 (mg/L):	0.00
H2S in Gas (%):	
H2S in Water (mg/L):	0.00

Analysis @ Properties in Sample Specifics			
Cations	mg/L	Anions	mg/L
Sodium (Na):	5277.36	Chloride (Cl):	7000.00
Potassium (K):	65.03	Sulfate (SO4):	0.00
Magnesium (Mg):	7.80	Bicarbonate (HCO3):	2196.00
Calcium (Ca):	24.60	Carbonate (CO3):	
Strontium (Sr):	5.20	Acetic Acid (CH3COO):	
Barium (Ba):	12.37	Propionic Acid (C2H5COO):	
Iron (Fe):	0.34	Butanoic Acid (C3H7COO):	
Zinc (Zn):	1.16	Isobutyric Acid ((CH3)2CHCOO):	
Lead (Pb):	0.04	Fluoride (F):	
Ammonia NH3:		Bromine (Br):	
Manganese (Mn):	0.08	Silica (SiO2):	

Notes:

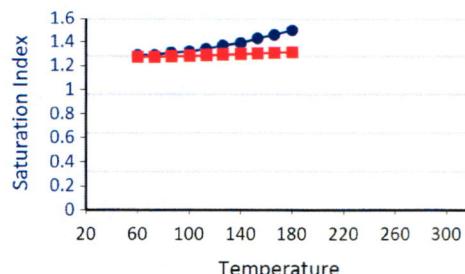
(PTB = Pounds per Thousand Barrels)

Temp (°F)	PSI	Calcium Carbonate		Barium Sulfate		Iron Sulfide		Iron Carbonate		Gypsum CaSO4·2H2O		Celestite SrSO4		Halite NaCl		Zinc Sulfide	
		SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB
180	2000	1.50	20.58	0.00	0.00	0.00	0.00	1.72	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
166	1779	1.46	20.48	0.00	0.00	0.00	0.00	1.67	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
153	1558	1.43	20.39	0.00	0.00	0.00	0.00	1.63	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
140	1338	1.39	20.30	0.00	0.00	0.00	0.00	1.57	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
126	1117	1.37	20.21	0.00	0.00	0.00	0.00	1.52	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
113	897	1.34	20.13	0.00	0.00	0.00	0.00	1.46	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100	676	1.32	20.05	0.00	0.00	0.00	0.00	1.40	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
86	455	1.31	19.99	0.00	0.00	0.00	0.00	1.34	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
73	235	1.29	19.93	0.00	0.00	0.00	0.00	1.28	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
60	14	1.29	19.93	0.00	0.00	0.00	0.00	1.22	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

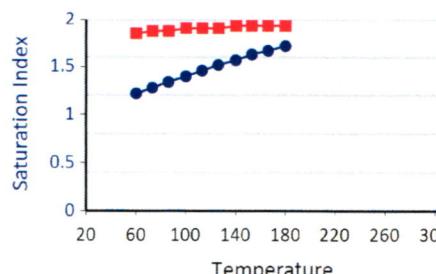
Temp (°F)	PSI	Hemihydrate CaSO4·0.5H2O		Anhydrate CaSO4		Calcium Fluoride		Zinc Carbonate		Lead Sulfide		Mg Silicate		Ca Mg Silicate		Fe Silicate	
		SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB
180	2000	0.00	0.00	0.00	0.00	0.00	0.00	2.16	0.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
166	1779	0.00	0.00	0.00	0.00	0.00	0.00	2.05	0.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
153	1558	0.00	0.00	0.00	0.00	0.00	0.00	1.93	0.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
140	1338	0.00	0.00	0.00	0.00	0.00	0.00	1.80	0.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
126	1117	0.00	0.00	0.00	0.00	0.00	0.00	1.65	0.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
113	897	0.00	0.00	0.00	0.00	0.00	0.00	1.50	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100	676	0.00	0.00	0.00	0.00	0.00	0.00	1.34	0.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
86	455	0.00	0.00	0.00	0.00	0.00	0.00	1.17	0.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
73	235	0.00	0.00	0.00	0.00	0.00	0.00	0.98	0.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
60	14	0.00	0.00	0.00	0.00	0.00	0.79	0.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Water Analysis Report

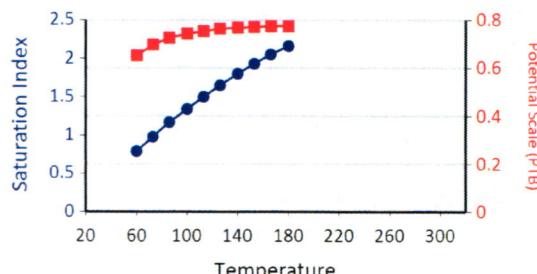
Calcium Carbonate



Iron Carbonate



Zinc Carbonate



Water Analysis Report

Production Company: PETROGLYPH OPERATING CO INC - EBUS

Well Name: UTE TRIBAL 19-09 INJ, DUCHESNE

Sample Point: WELLHEAD

Sample Date: 1/7/2015

Sample ID: WA-297431

Sales Rep: James Patry

Lab Tech: Gary Winegar

Scaling potential predicted using ScaleSoftPitzer from
Brine Chemistry Consortium (Rice University)

Sample Specifics		Analysis @ Properties in Sample Specifics									
		Cations				mg/L		Anions			
Test Date:	1/14/2015	Sodium (Na):		2789.09		Chloride (Cl):					5000.00
System Temperature 1 (°F):	160	Potassium (K):		41.23		Sulfate (SO4):					133.00
System Pressure 1 (psig):	1300	Magnesium (Mg):		21.03		Bicarbonate (HCO3):					2074.00
System Temperature 2 (°F):	80	Calcium (Ca):		37.38		Carbonate (CO3):					
System Pressure 2 (psig):	15	Strontium (Sr):		4.94		Acetic Acid (CH3COO):					
Calculated Density (g/ml):	1.0041	Barium (Ba):		3.40		Propionic Acid (C2H5COO):					
pH:	6.50	Iron (Fe):		1.08		Butanoic Acid (C3H7COO):					
Calculated TDS (mg/L):	10129.85	Zinc (Zn):		0.65		Isobutyric Acid ((CH3)2CHCOO):					
CO2 in Gas (%):		Lead (Pb):		0.00		Fluoride (F):					
Dissolved CO2 (mg/L):	0.00	Ammonia NH3:				Bromine (Br):					
H2S in Gas (%):		Manganese (Mn):		0.08		Silica (SiO2):					23.97
H2S in Water (mg/L):	20.00										

Notes:

B=6.16 Al=.03 Li=1.35

(PTB = Pounds per Thousand Barrels)

		Calcium Carbonate		Barium Sulfate		Iron Sulfide		Iron Carbonate		Gypsum CaSO4·2H2O		Celestite SrSO4		Halite NaCl		Zinc Sulfide	
Temp (°F)	PSI	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB
80.00	14.00	0.00	0.00	1.33	1.93	1.30	0.56	0.03	0.06	0.00	0.00	0.00	0.00	0.00	0.00	9.12	0.34
88.00	157.00	0.00	0.00	1.25	1.91	1.15	0.55	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	8.85	0.34
97.00	300.00	0.00	0.00	1.17	1.89	1.13	0.55	0.07	0.12	0.00	0.00	0.00	0.00	0.00	0.00	8.74	0.34
106.00	443.00	0.00	0.00	1.10	1.86	1.13	0.55	0.13	0.20	0.00	0.00	0.00	0.00	0.00	0.00	8.63	0.34
115.00	585.00	0.00	0.00	1.04	1.84	1.13	0.55	0.19	0.28	0.00	0.00	0.00	0.00	0.00	0.00	8.53	0.34
124.00	728.00	0.00	0.00	0.98	1.81	1.13	0.55	0.26	0.35	0.00	0.00	0.00	0.00	0.00	0.00	8.44	0.34
133.00	871.00	0.00	0.00	0.92	1.78	1.15	0.55	0.32	0.41	0.00	0.00	0.00	0.00	0.00	0.00	8.35	0.34
142.00	1014.00	0.00	0.00	0.88	1.75	1.17	0.55	0.38	0.46	0.00	0.00	0.00	0.00	0.00	0.00	8.28	0.34
151.00	1157.00	0.00	0.00	0.83	1.72	1.19	0.56	0.44	0.50	0.00	0.00	0.00	0.00	0.00	0.00	8.21	0.34
160.00	1300.00	0.00	0.00	0.79	1.70	1.22	0.56	0.50	0.54	0.00	0.00	0.00	0.00	0.00	0.00	8.14	0.34

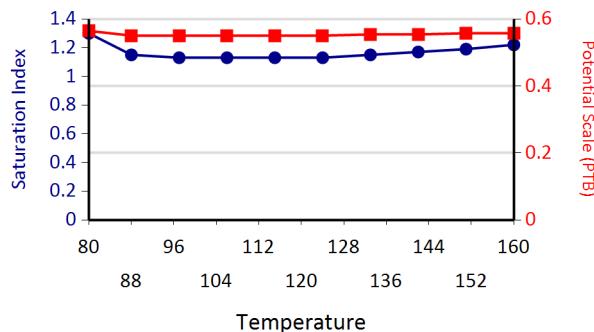
		Hemihydrate CaSO4·0.5H2O		Anhydrate CaSO4		Calcium Fluoride		Zinc Carbonate		Lead Sulfide		Mg Silicate		Ca Mg Silicate		Fe Silicate	
Temp (°F)	PSI	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB
80.00	14.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
88.00	157.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
97.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
106.00	443.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
115.00	585.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
124.00	728.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
133.00	871.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
142.00	1014.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
151.00	1157.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
160.00	1300.00	0.00	0.00	0.00	0.00	0.00	0.04	0.04	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Water Analysis Report

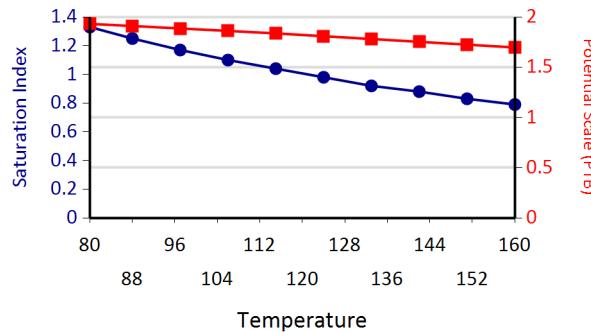
These scales have positive scaling potential under initial temperature and pressure: Barium Sulfate Iron Sulfide Iron Carbonate Zinc Sulfide

These scales have positive scaling potential under final temperature and pressure: Barium Sulfate Iron Sulfide Iron Carbonate Zinc Sulfide Zinc Carbonate

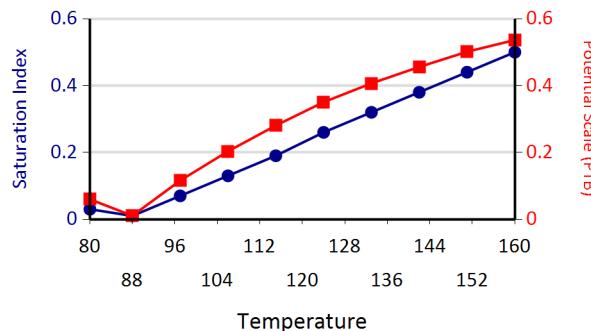
Iron Sulfide



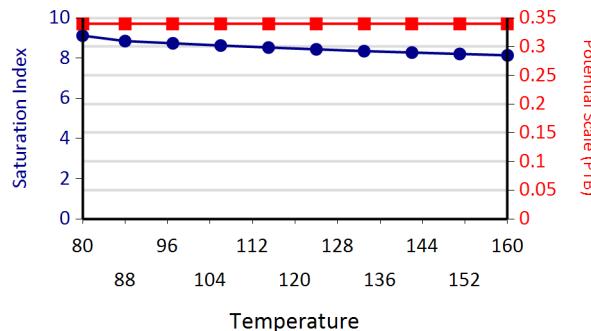
Barium Sulfate



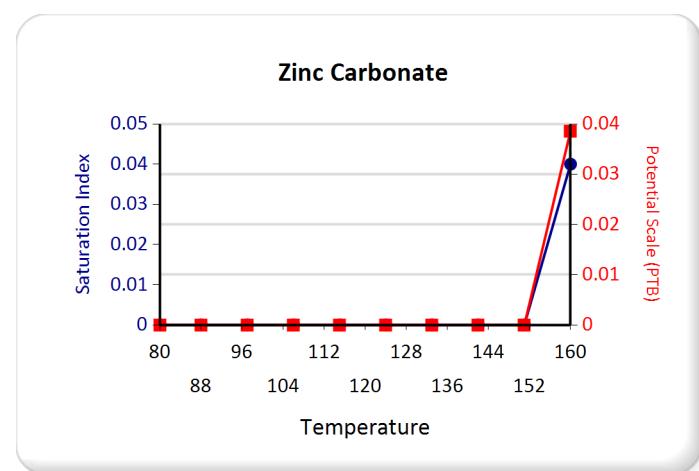
Iron Carbonate



Zinc Sulfide



Water Analysis Report



ATTACHMENT NO. 6

COMPLETION DATA FOR ALL WELLS IN THE AOR

Well Completion Data

Ute Tribal 20-07

Well	Surface Casing				Production Casing			
	Size (inches)	Depth (ft KB)	Cement Amount (sx)	Cement Top	Size (inches)	Depth (ft KB)	Cement Amount (sx)	Estimated Cement Top
Ute Tribal 20-07	8-5/8	380	190	surface	5-1/2	6690	1450	surface
Ute Tribal 20-06	8-5/8	317	200	surface	5-1/2	6025	1300	surface
Ute Tribal 20-10	8-5/8	521	350	surface	5-1/2	6128	865	surface

ATTACHMENT NO. 7

CBL FOR THE UIC WELL

GEARHART

CEMENT BOND LOG

FILING NO.	43-013-30882						
COMPANY	COORS ENERGY COMPANY RECEIVED						
275663	WELL	UTE TRIBAL NO. 2-20			JUL 12 1984		
FIELD	UTE TRIBAL			CODO. OIL & GAS CONS. COMM.			
COUNTY	DUCHESNE			STATE UTAH			
LOCATION	SW NE			Other Services NONE / 6cc			
SEC	20	TWP	5S	RGE	3N		
Permanent Datum	G.L.	Elev 6404'			KB	Elevations:	
Log Measured from	K.B.	, 13.5 Ft. Above Permanent Datum			DF	6416.5	
Drilling Measured from	K.B.				GL	6404.0'	
Date	4-21-84	Type Fluid in Hole	N.A.				
Run No.	ONE	Dens.	Visc.				
Depth—Driller	6694'	Max. Rec. Temp.			N.A.		
Depth—Logger	6611'	Est. Cement Top	SURFACE				
Btrn. Log Interval	6604'	Equip.	Location	7214/6093	VERNAL		
Top Log Interval	50'	Recorded By	PETERSON				
Open Hole Size		Witnessed By					
CASING REC.	Size	Wt/ft	Grade	Type Joint	Top	Bottom	
Surface String	8-5/8	24		SURFACE	400'		
Prot. String	5.50			SURFACE	I.D.		
Prod. String							
Liner							
PRIMARY CEMENTING DATA							
STRING	Surface	Protection	Production	Liner			
Vol. of Cement							
Type of Cement							
Additive							
Additive by %							
Retarder							
Retarder by %							
Wt. of Slurry							
Water Loss							
Drill. Mud Type							
Drilling Mud Wt.							

RECEIVED

JUL 16 1984

DIVISION OF COT-

GAS & MINING

PRIMARY CEMENTING PROCEDURE				BOND EQUIPMENT DATA				
	Hour	Date	Tool No.	340	Tool Type	COMBO	Tool Size	3.25
Started Pumping Cement			Centralizer:		Type	RUBBER	Size	5.50
Plug on Bottom			No.	2	Position	TOP & BOTTOM		
Release Pressure			Transmitter to Receiver Spacing					
Finish Cementing Operation			Amplitude		Seismic Spectrum		Travel Time	
Start Cement Bond Log	13:57	4-21-84	3'		5'		3' & 5'	
Finish Cement Bond Log	17:11	4-21-84						
GAMMA RAY EQUIPMENT & LOGGING DATA								
Tool No.	340	Depths		Speed FPM	T. C. Sec.	Bkg. Cps.	Cal. Cps.	Sens.
Tool Model No.	COMBO	From	To	35	AUTO	160	410	250
Diameter	3.25	6599	50					0
Detector Model No.								20
Type								
Length								
Distance to N. Source								
REMARKS:								

NOTICE: All interpretations are opinions based on inferences from electrical or other measurements and we cannot, and do not, guarantee the accuracy of any such interpretation. We shall not be liable for any damages resulting from any error or omission in our report.

04-21-84 , 17:00

49.5

275663

0072-30

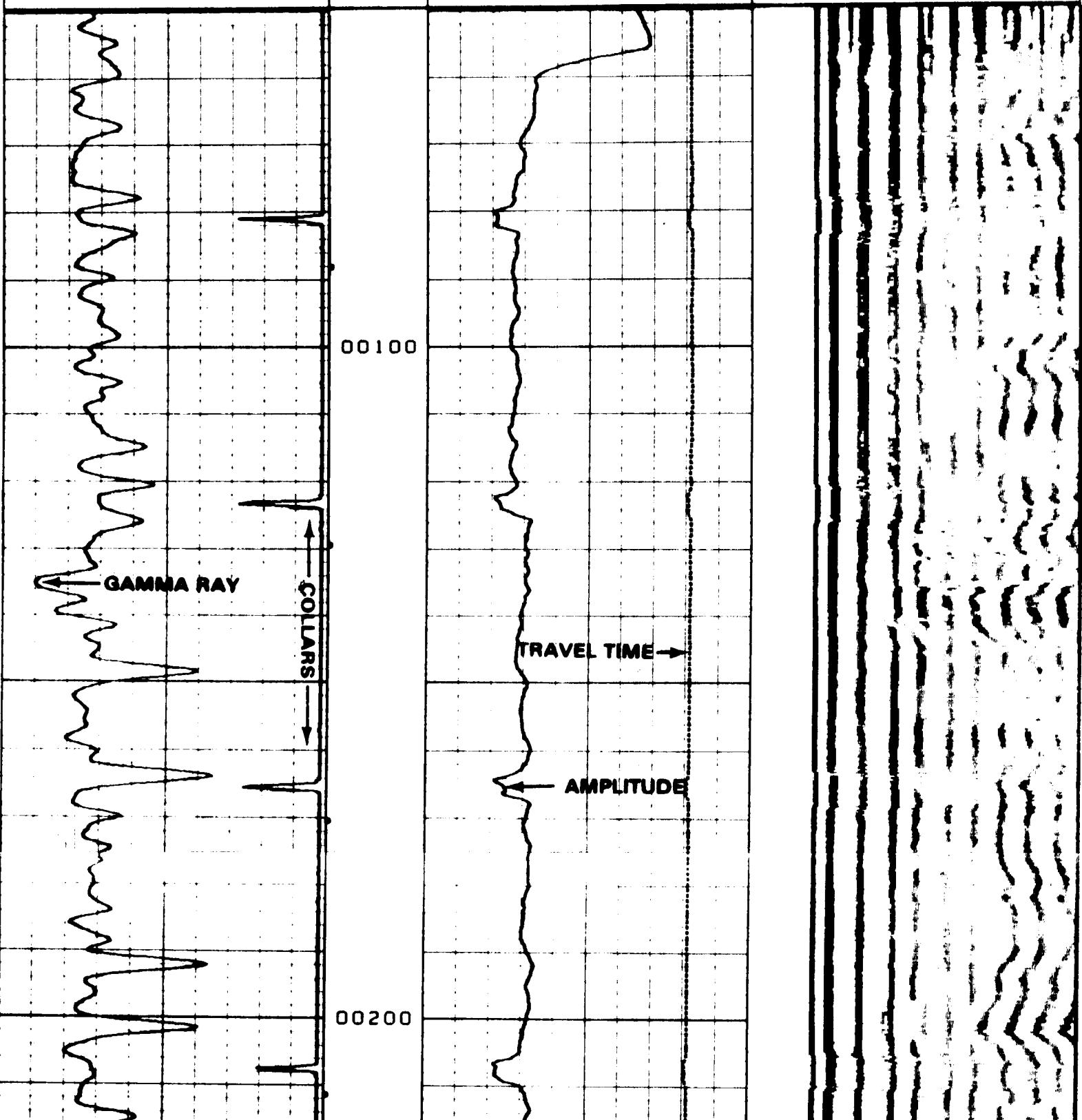
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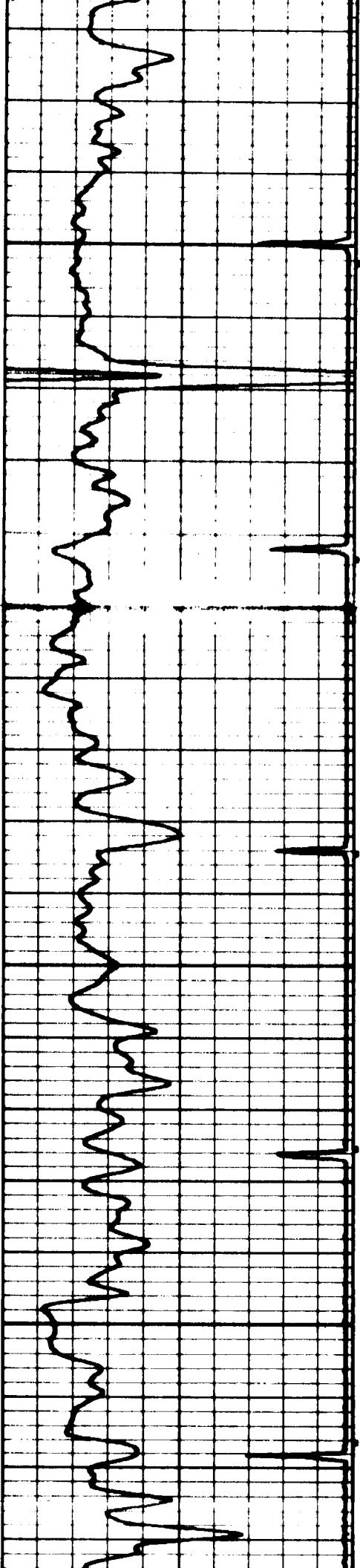
0001-11 4

450 CCL 235
0 GR API 200

220 TT/3 (μ S/FT) 20 200 S SPECTRUM 1200

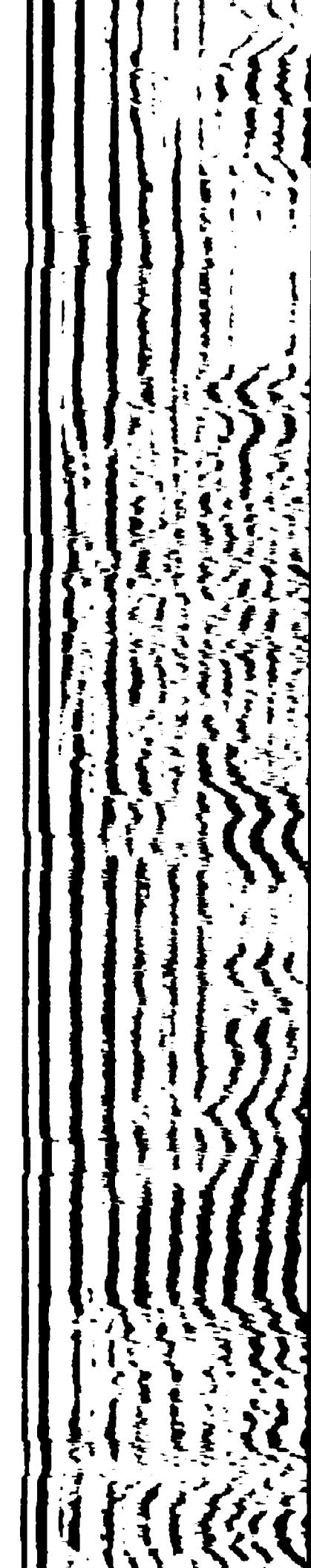
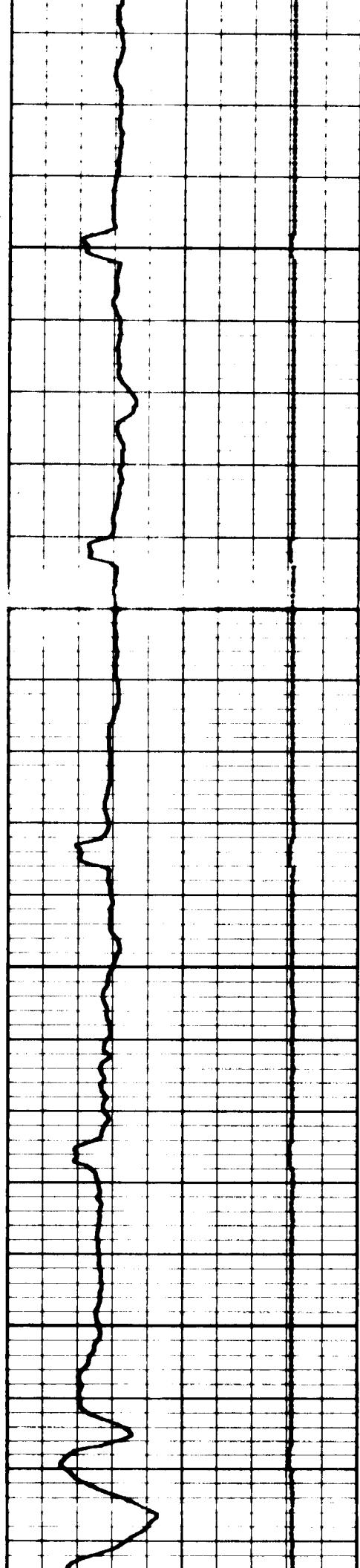
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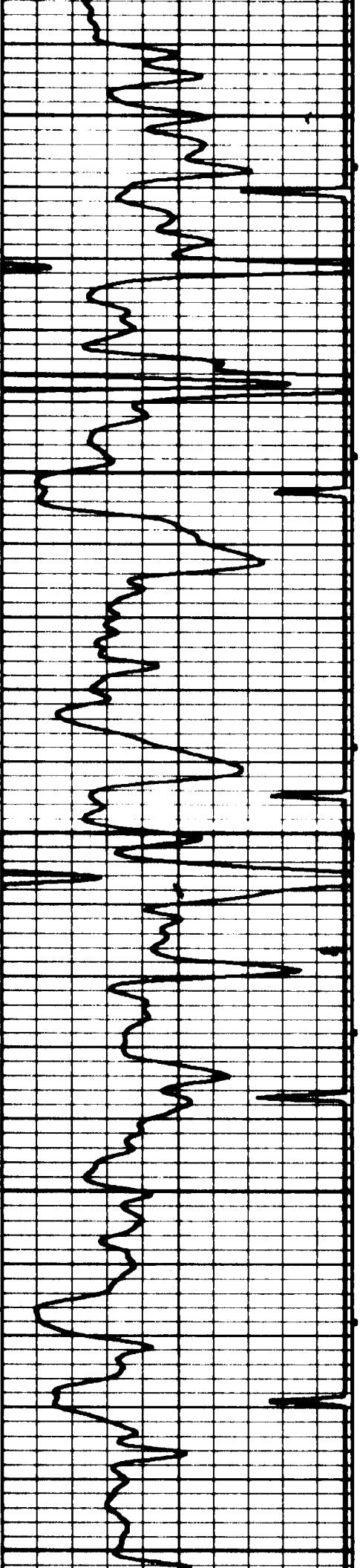




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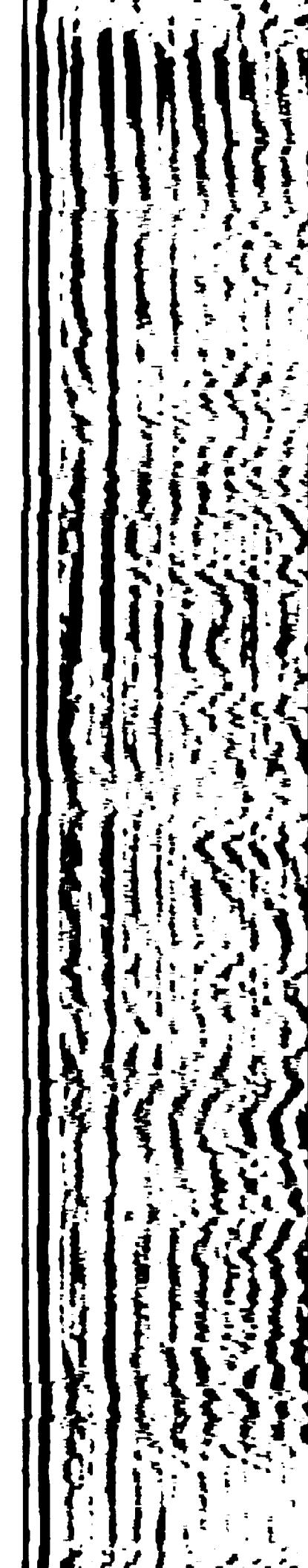
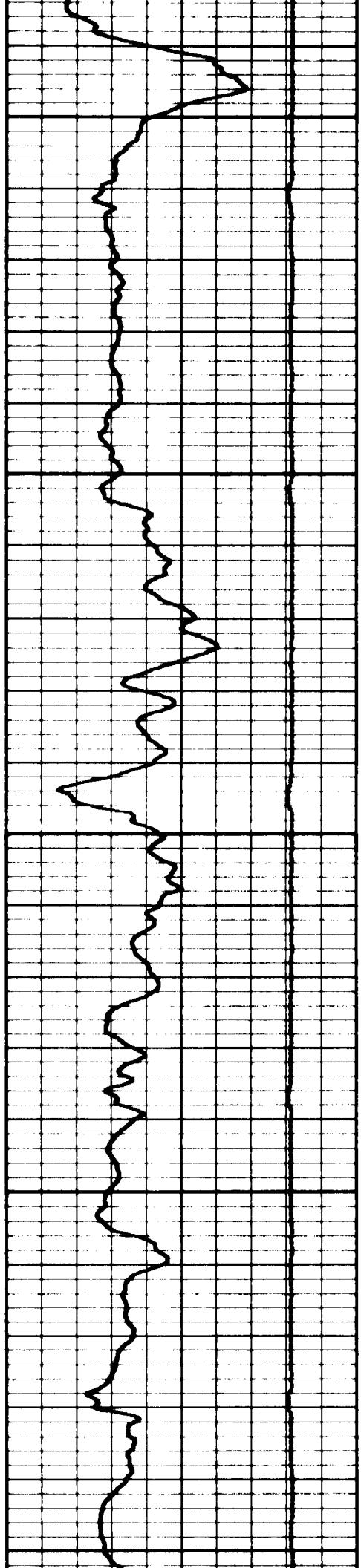
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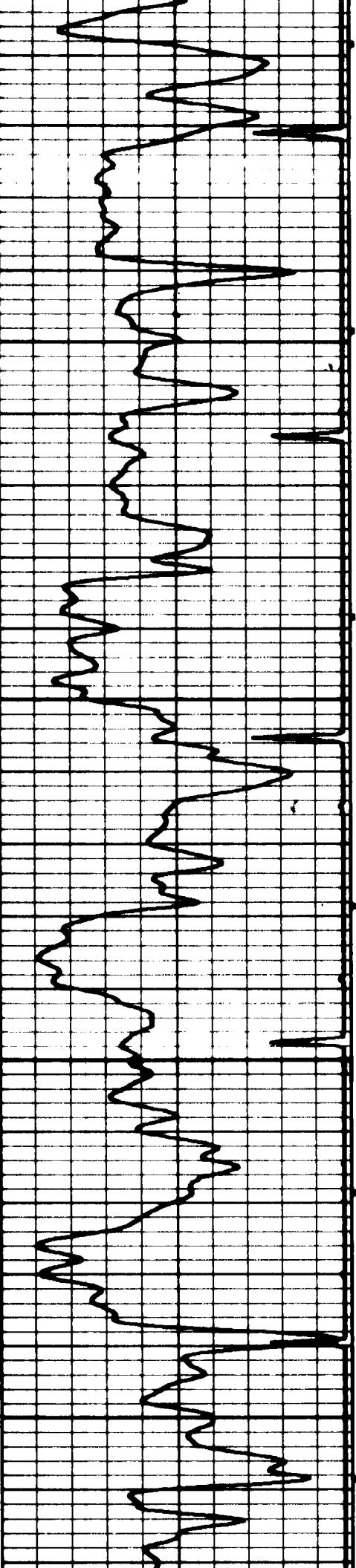




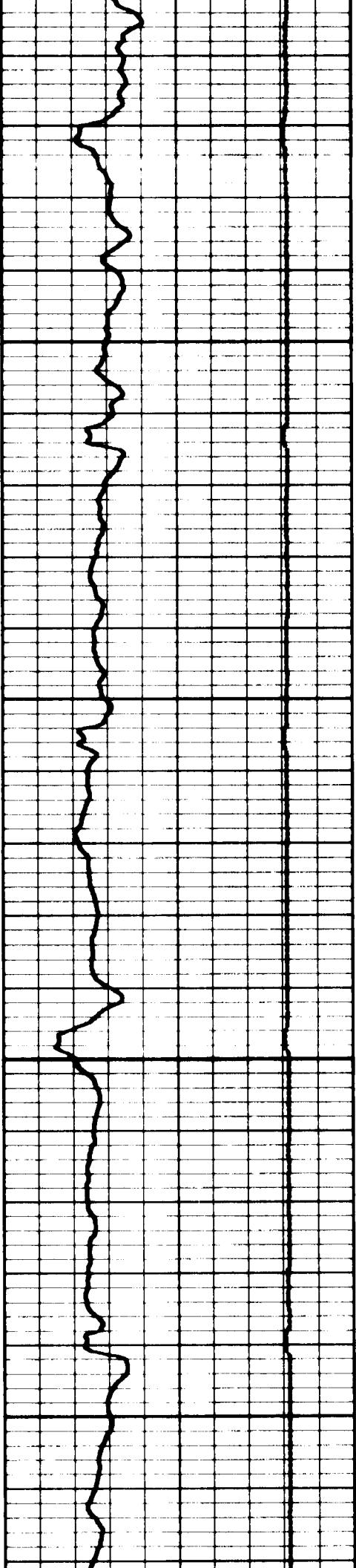
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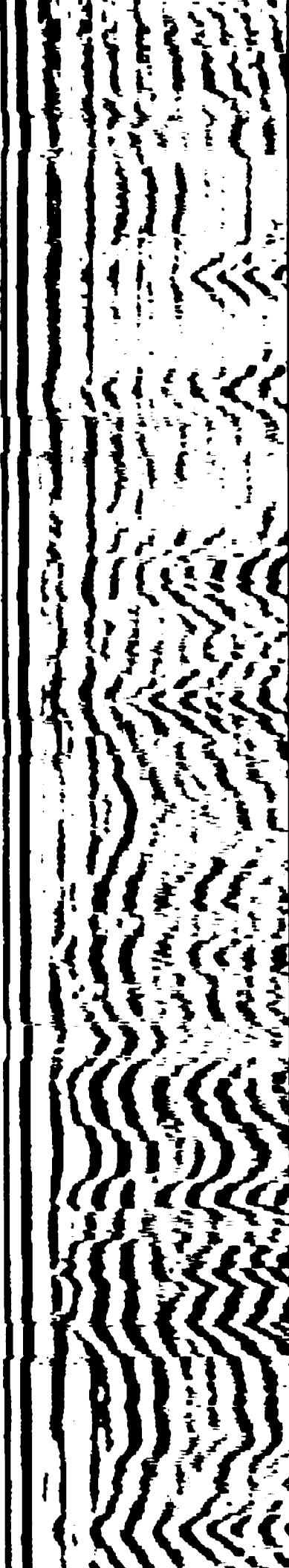


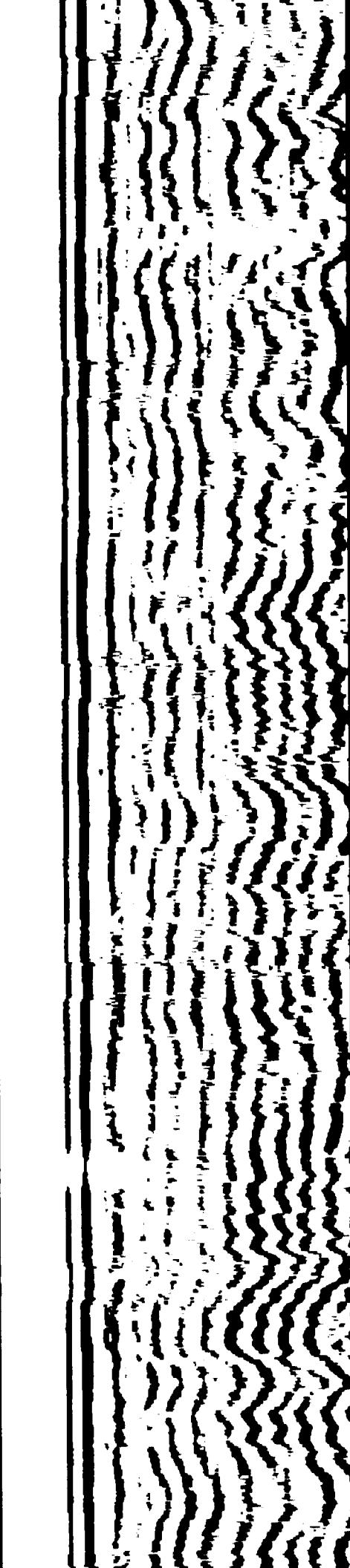
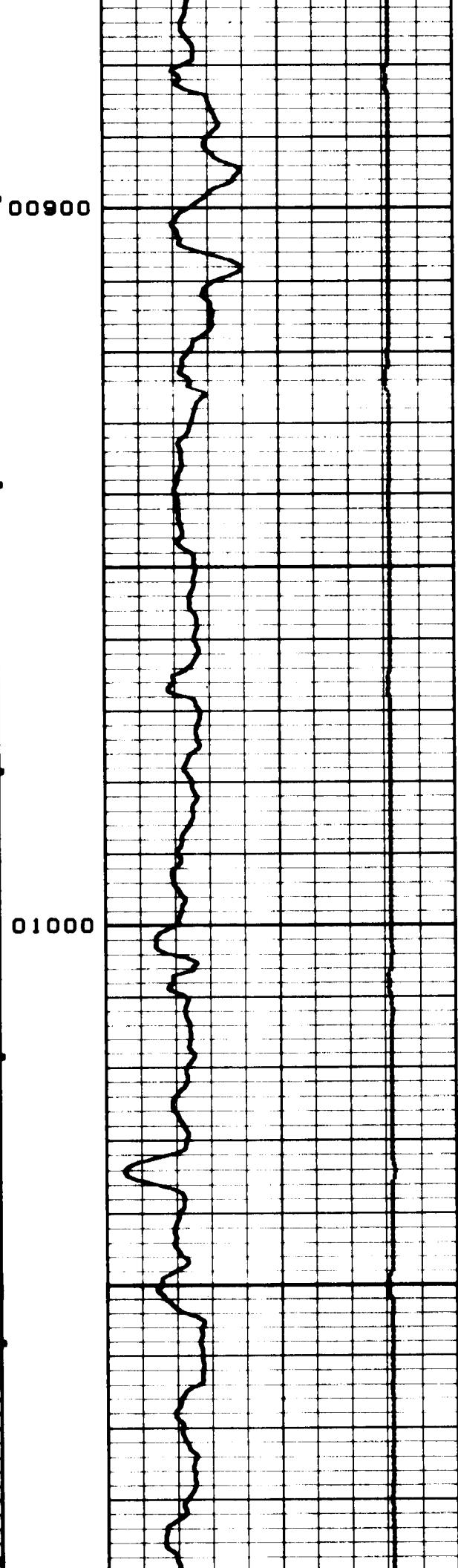
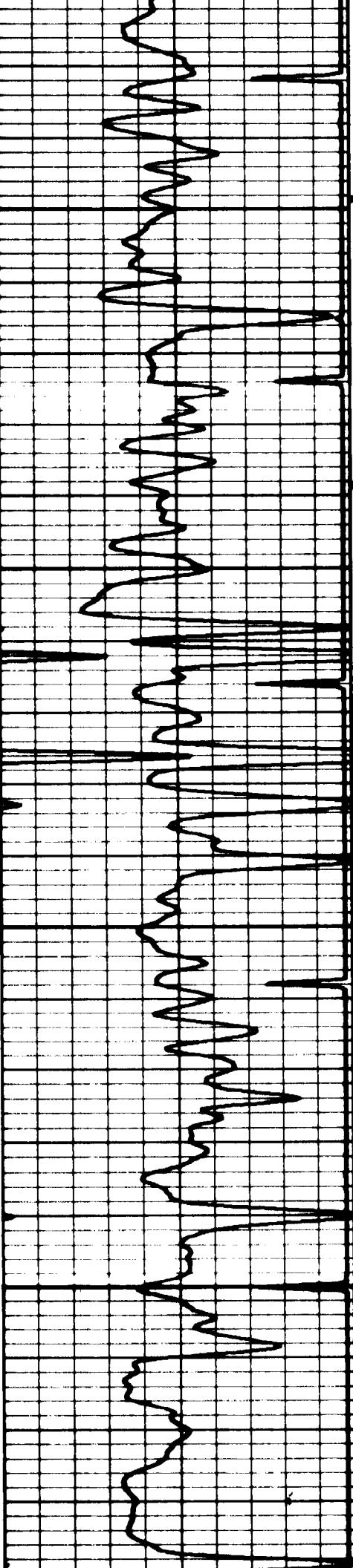


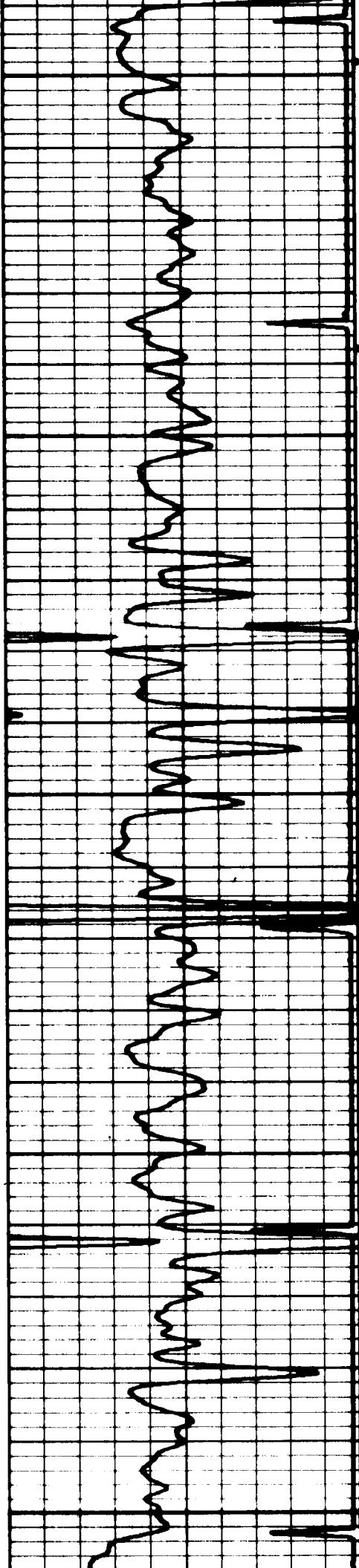
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00800



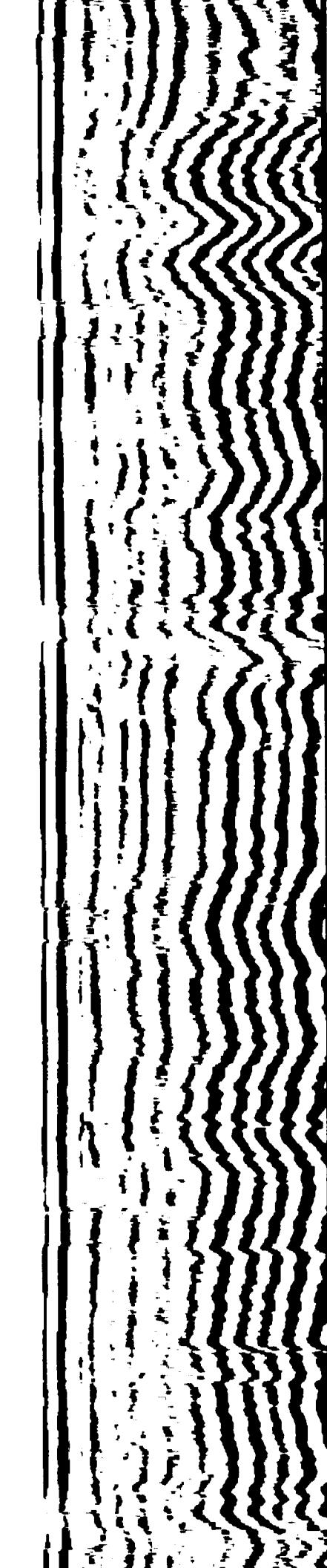
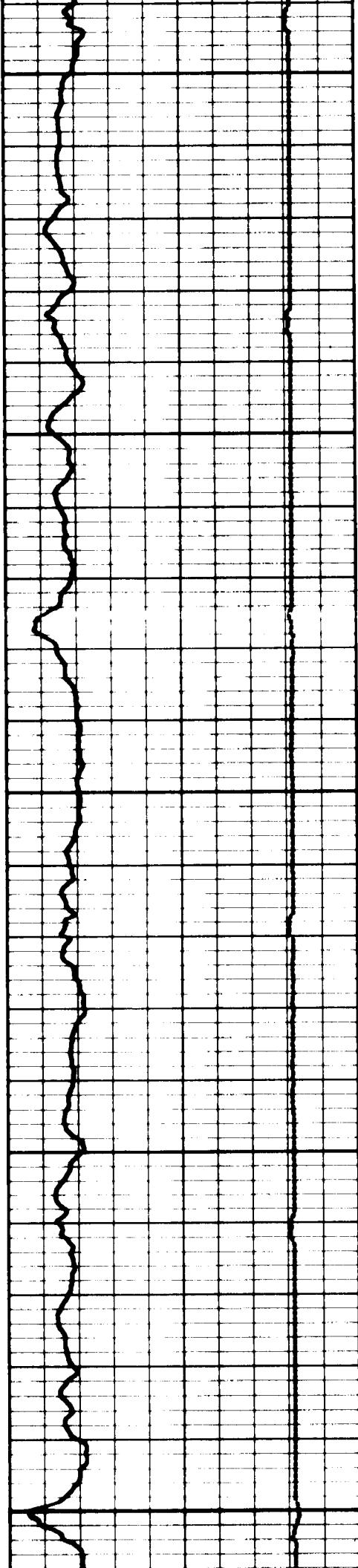


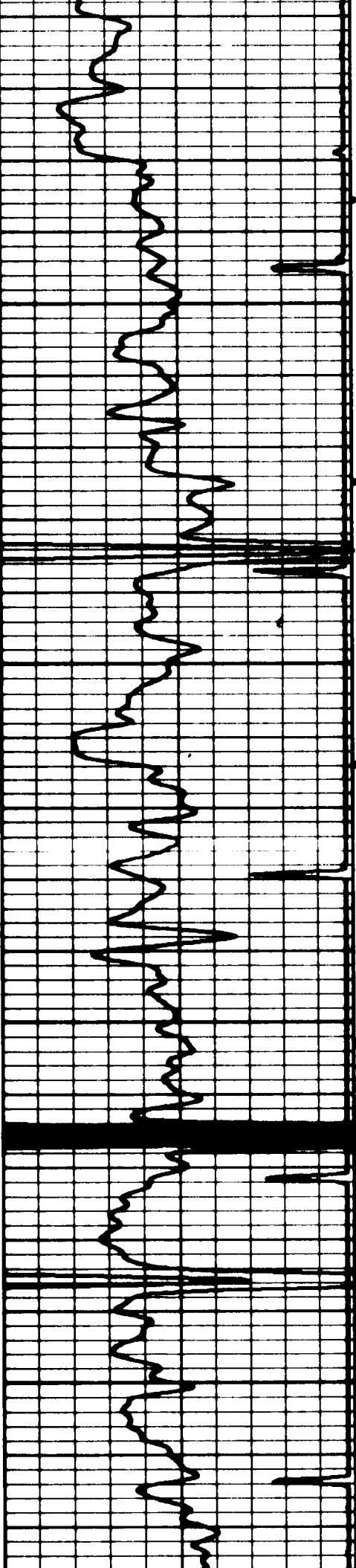


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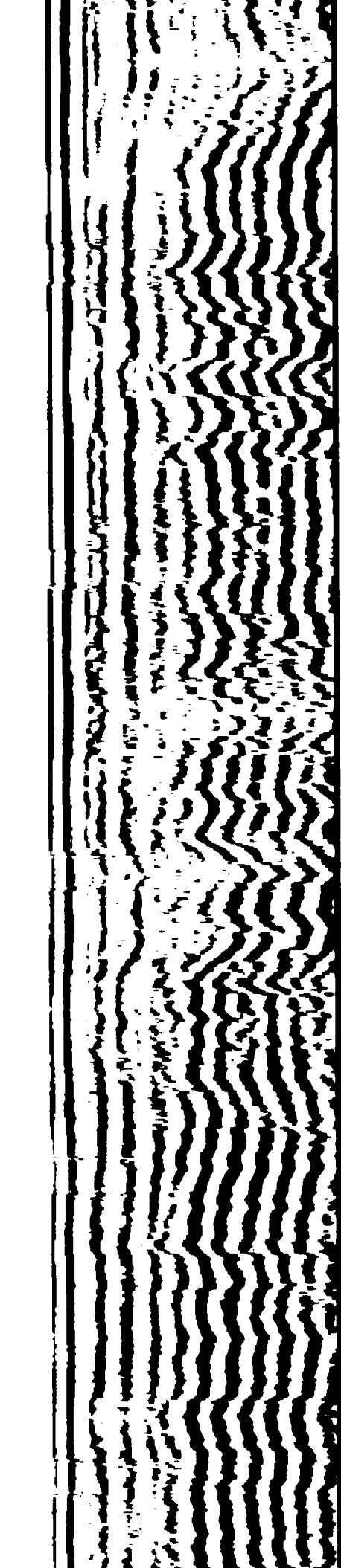
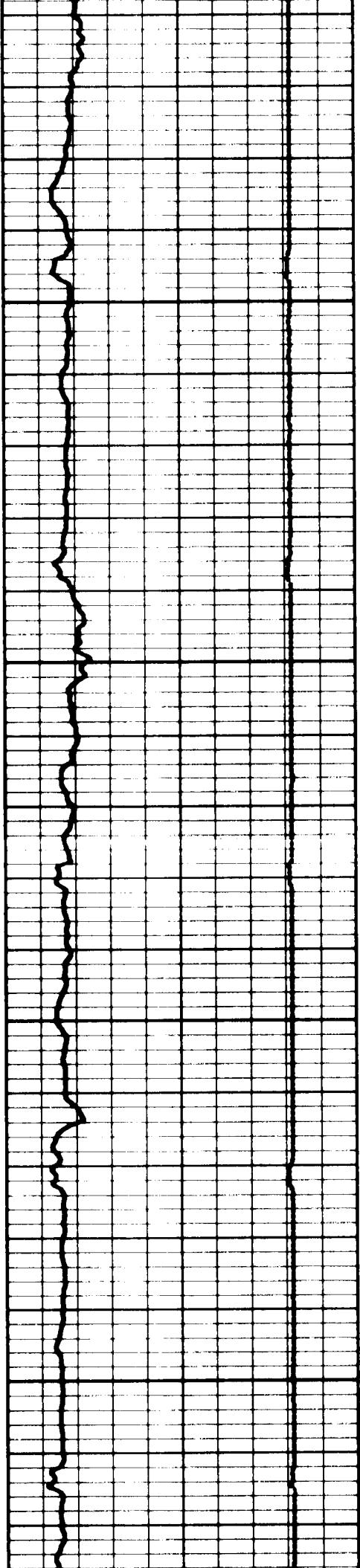
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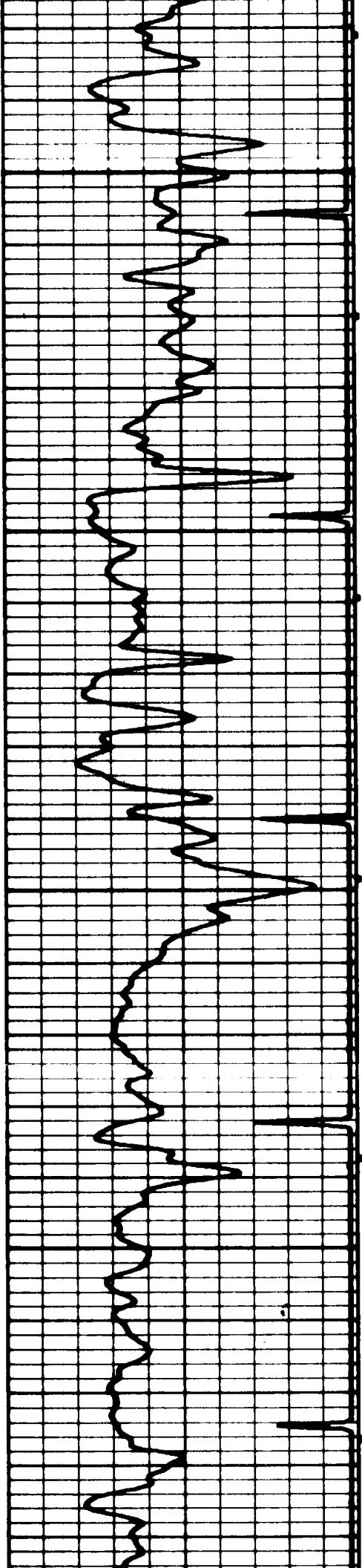




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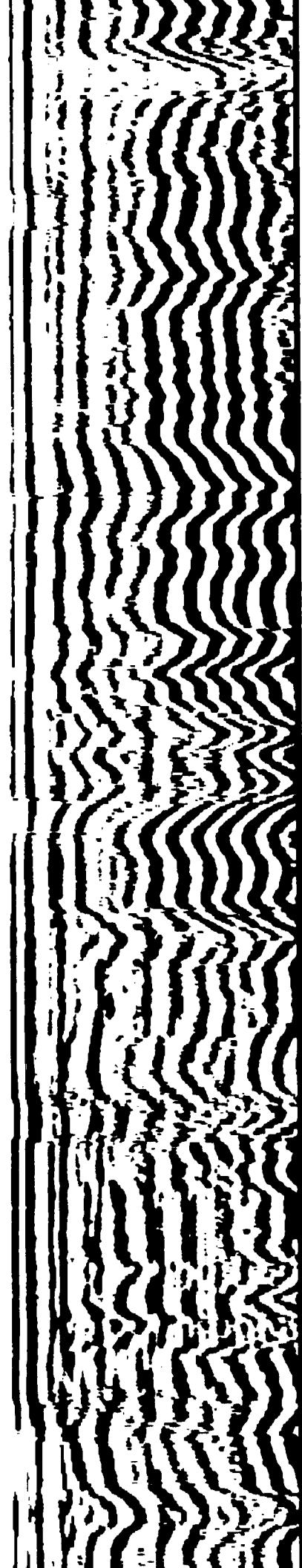
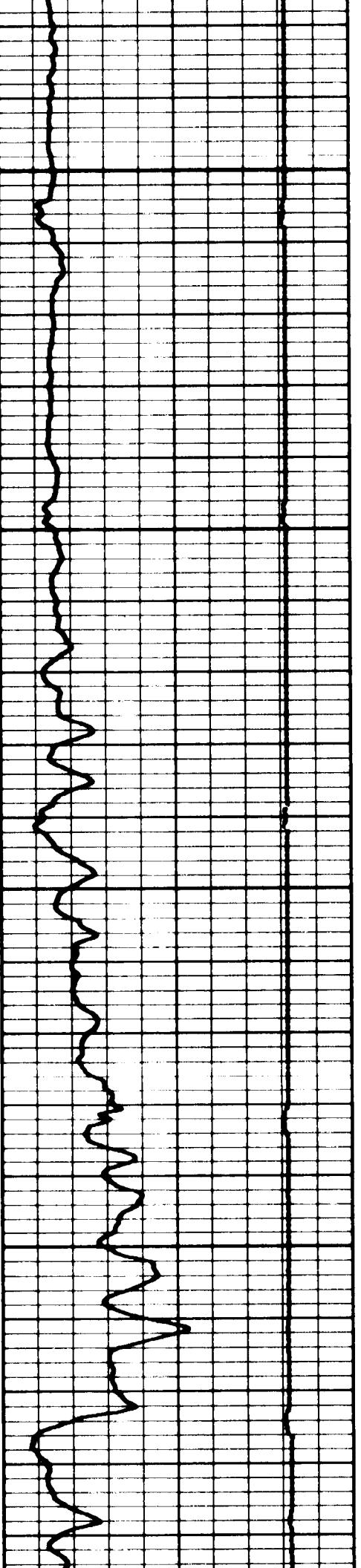
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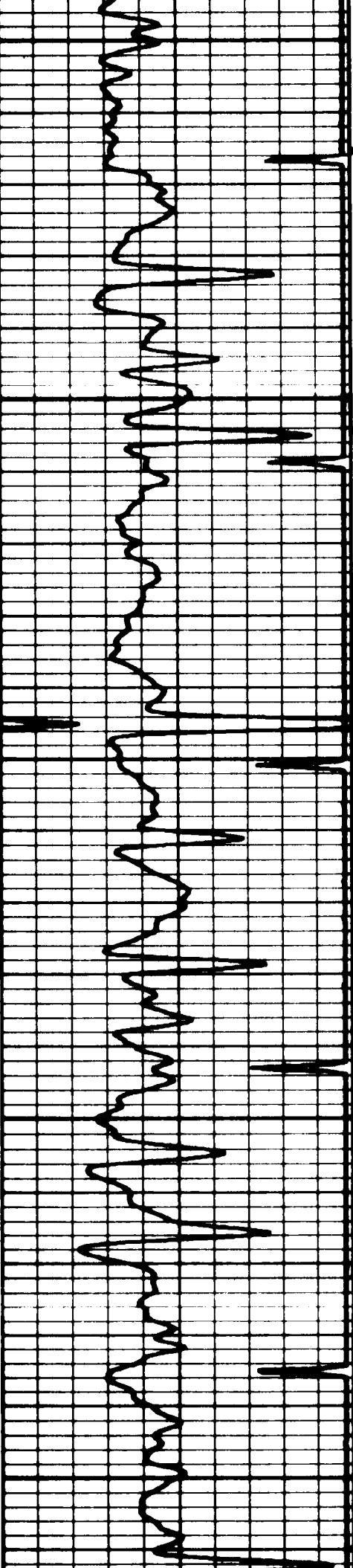




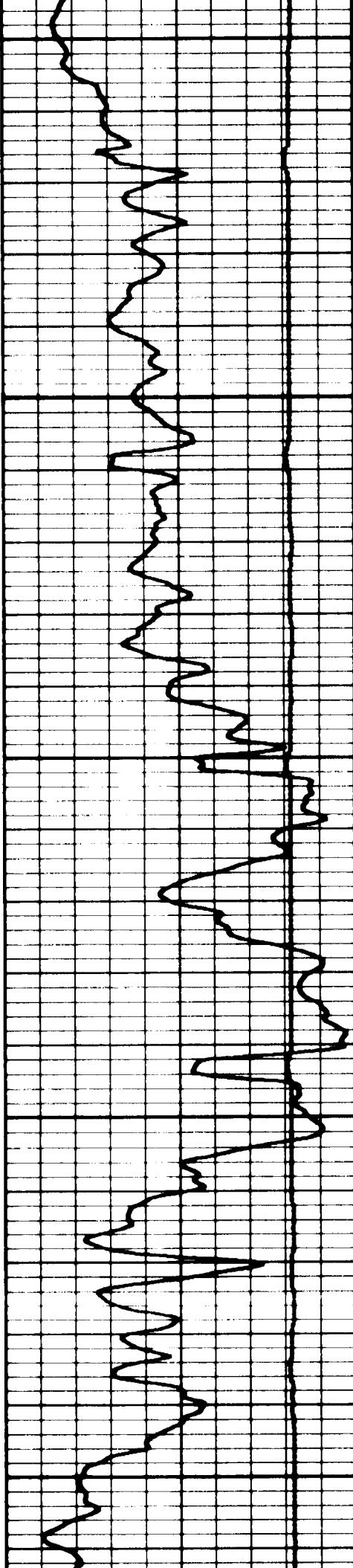
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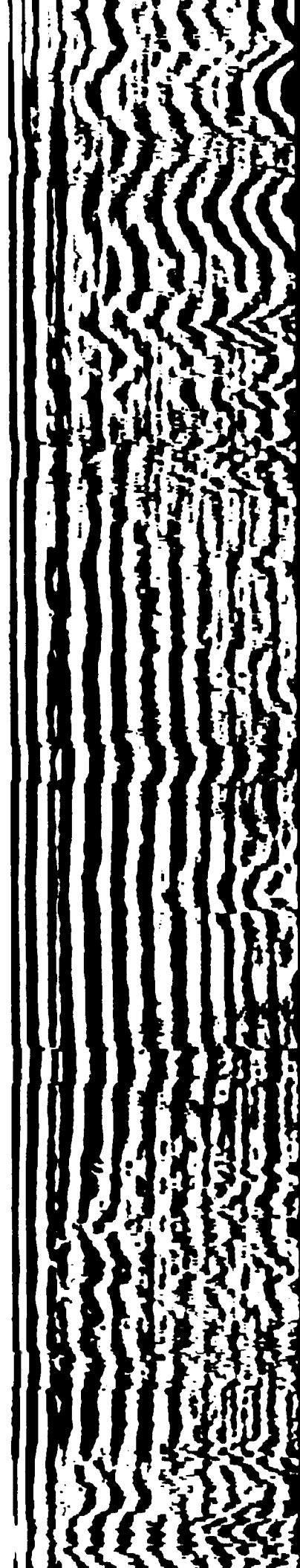


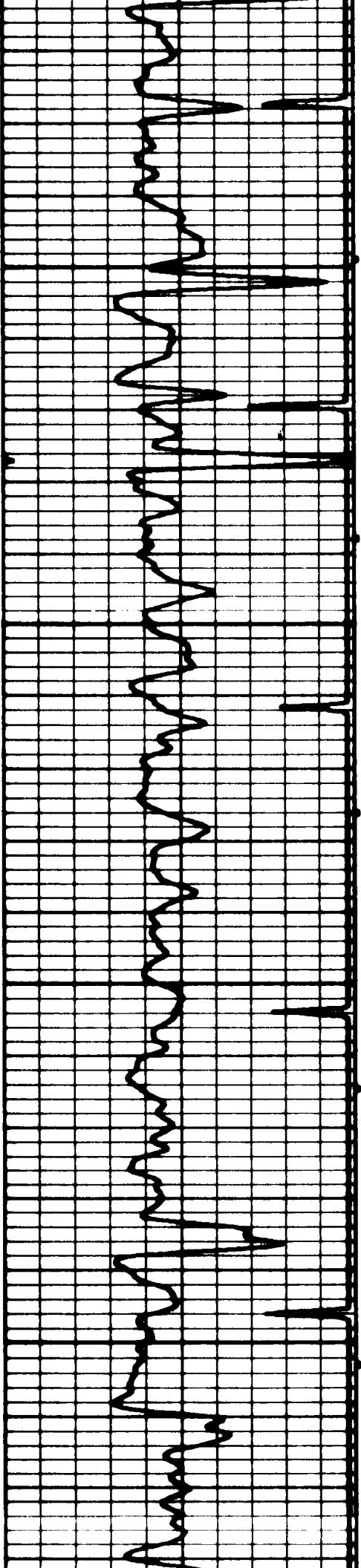


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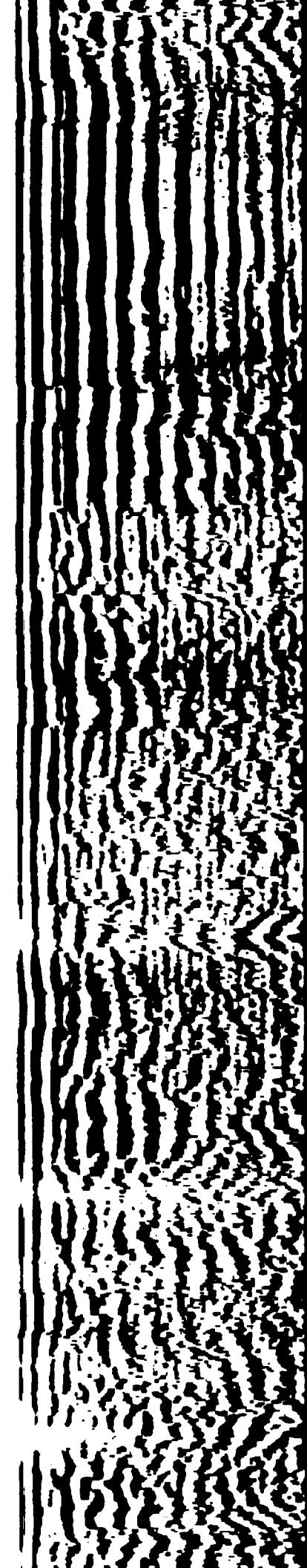
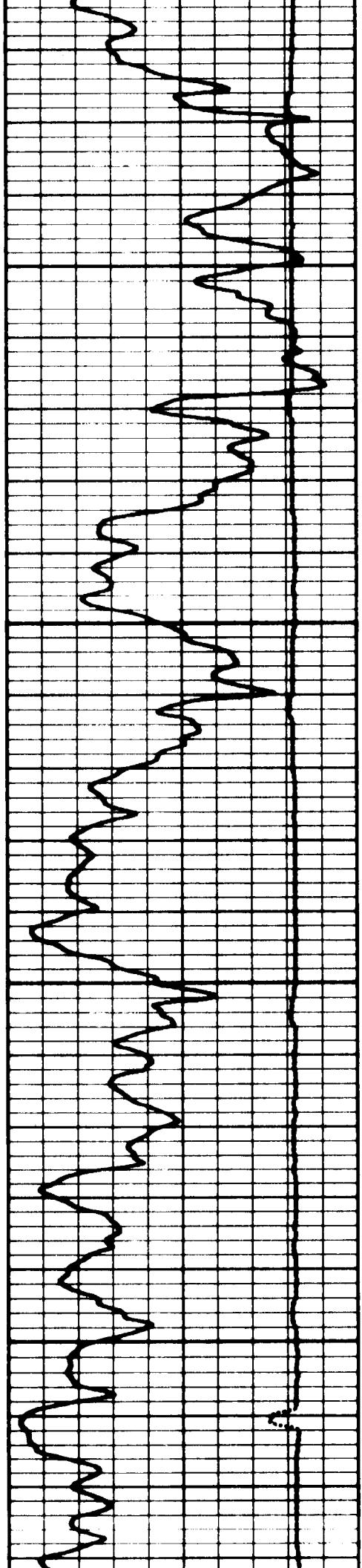
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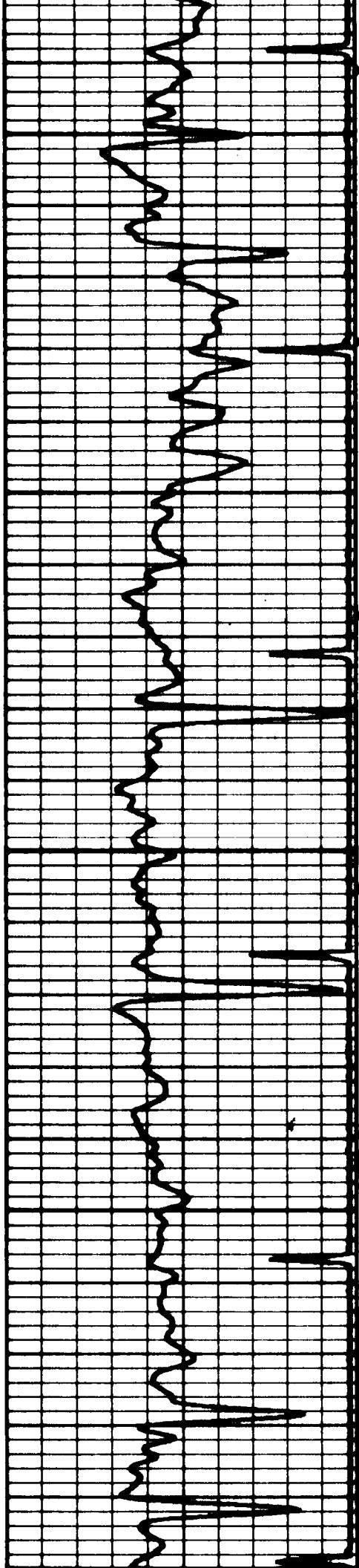




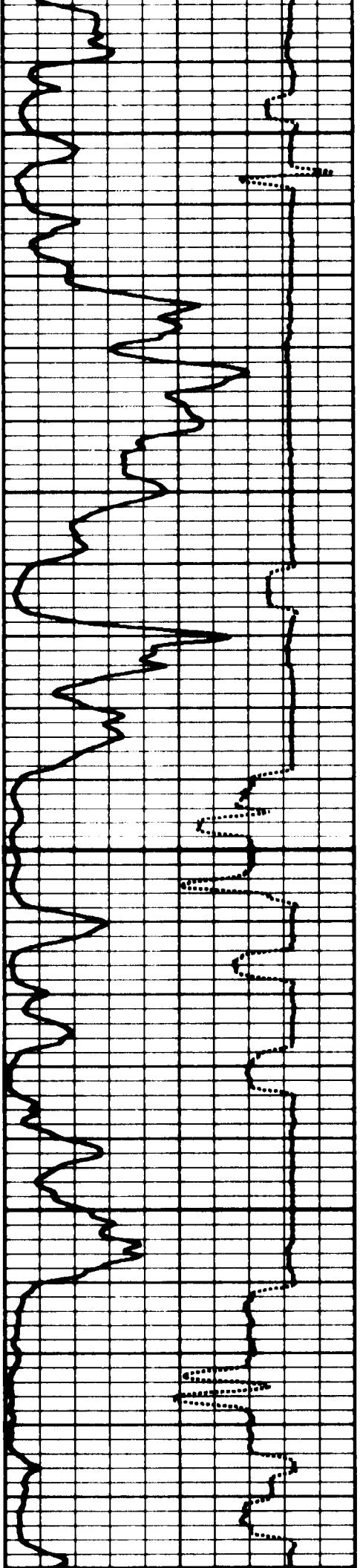
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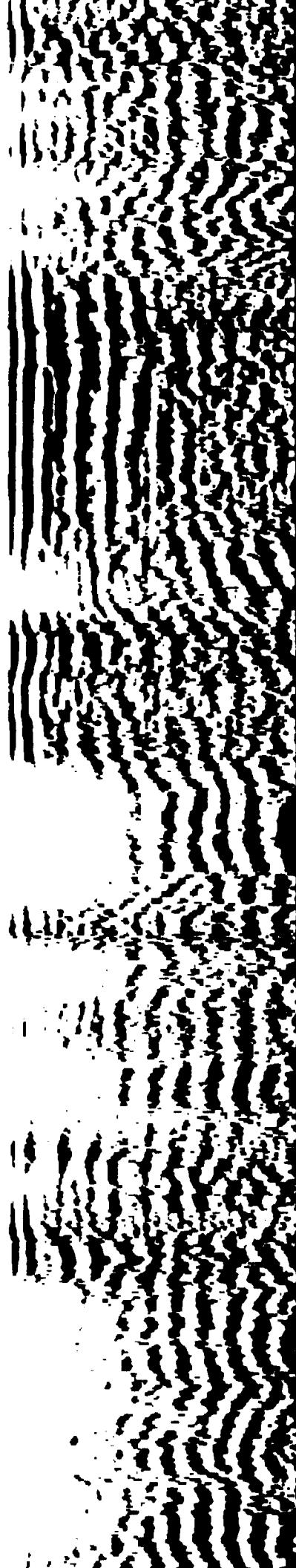




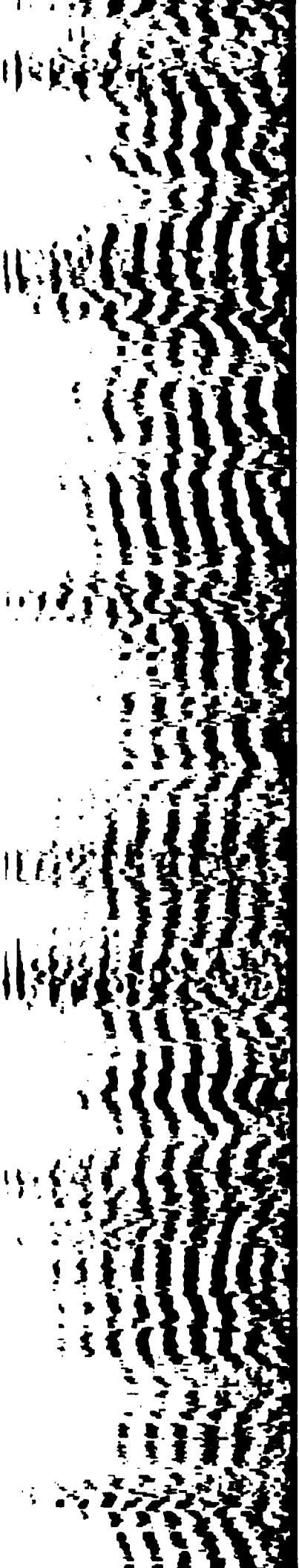
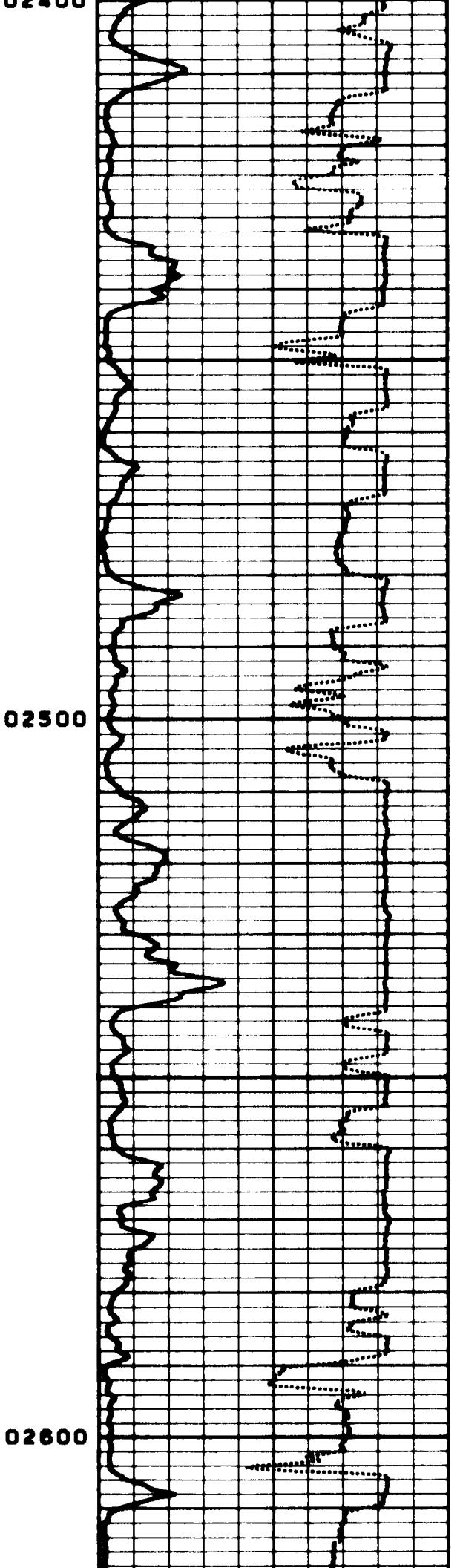
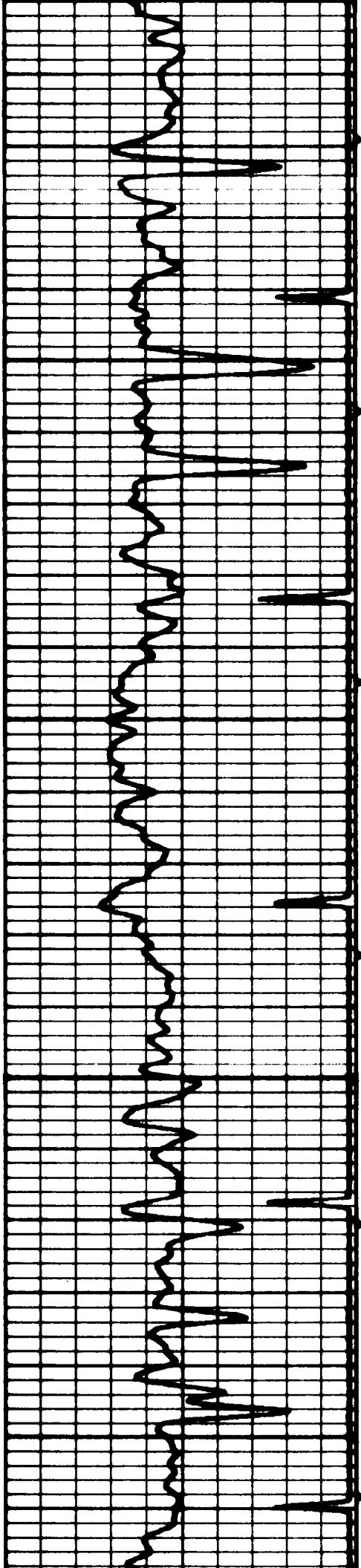
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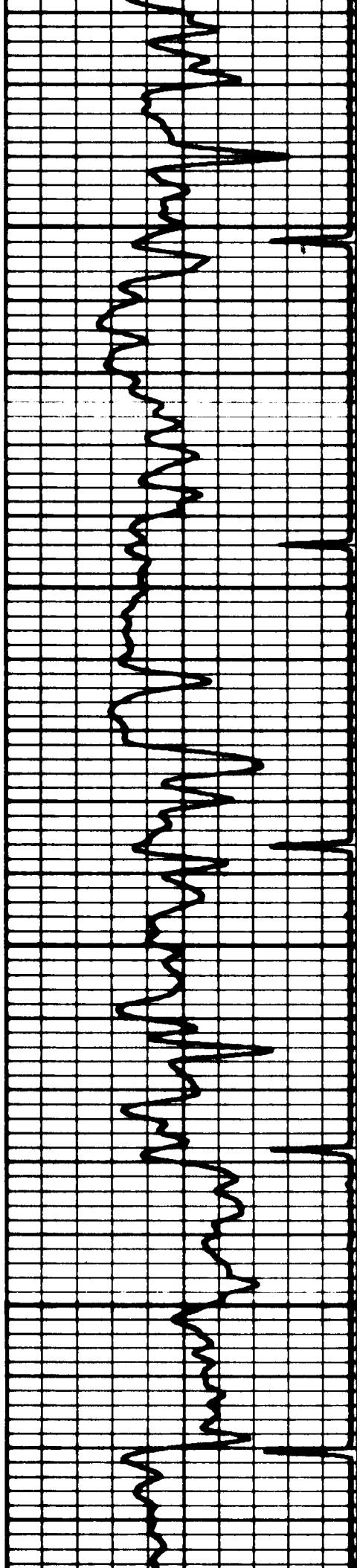


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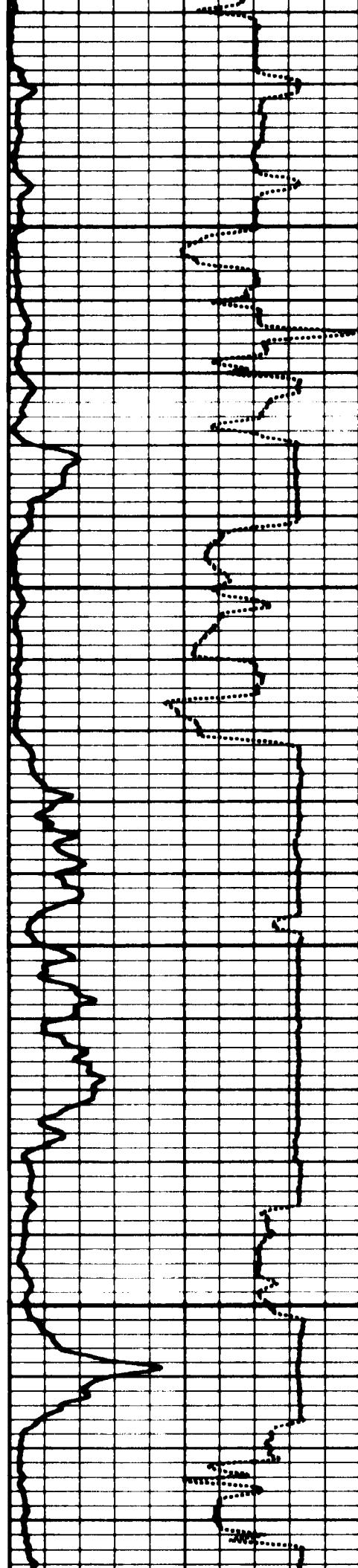


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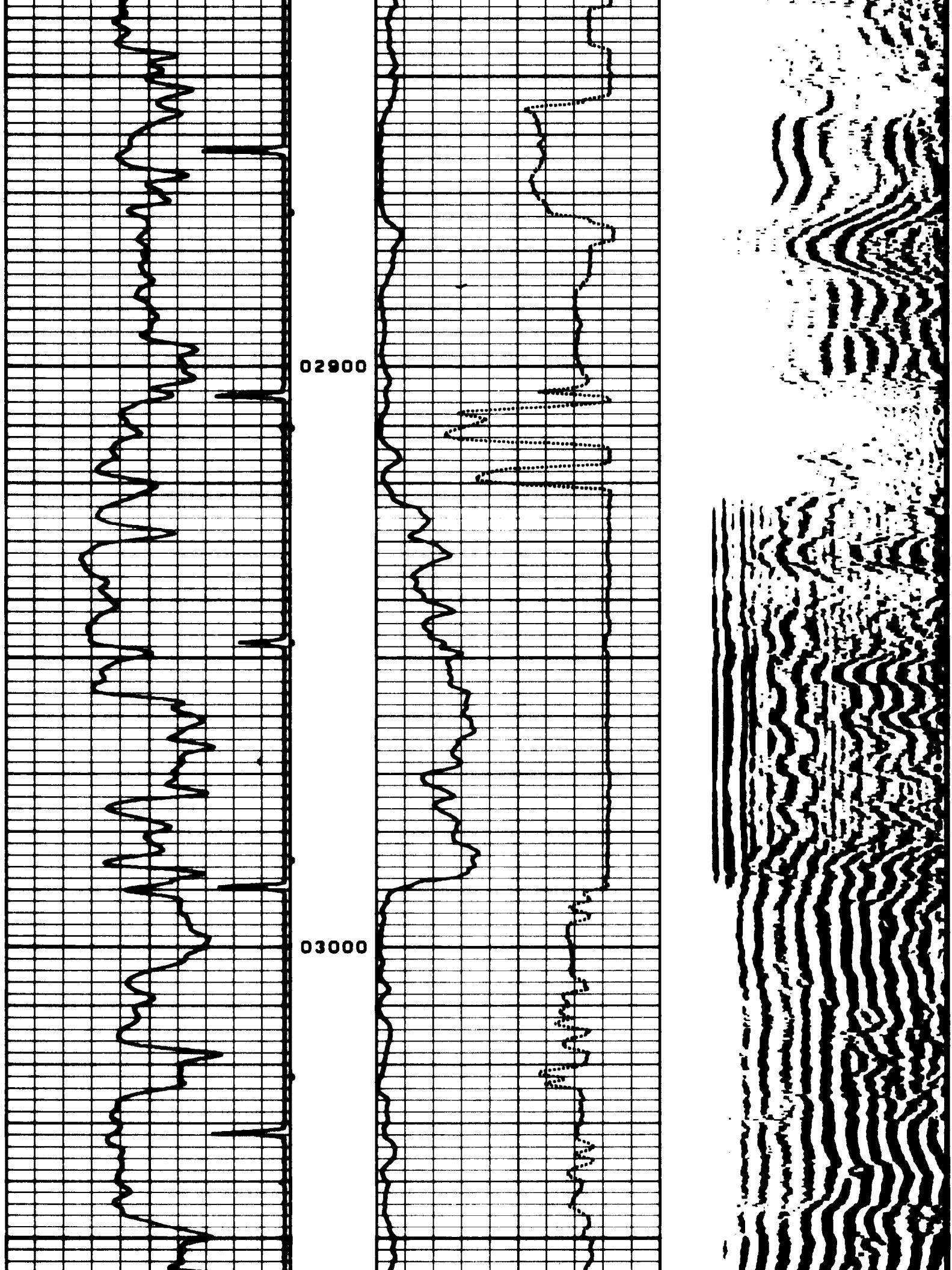


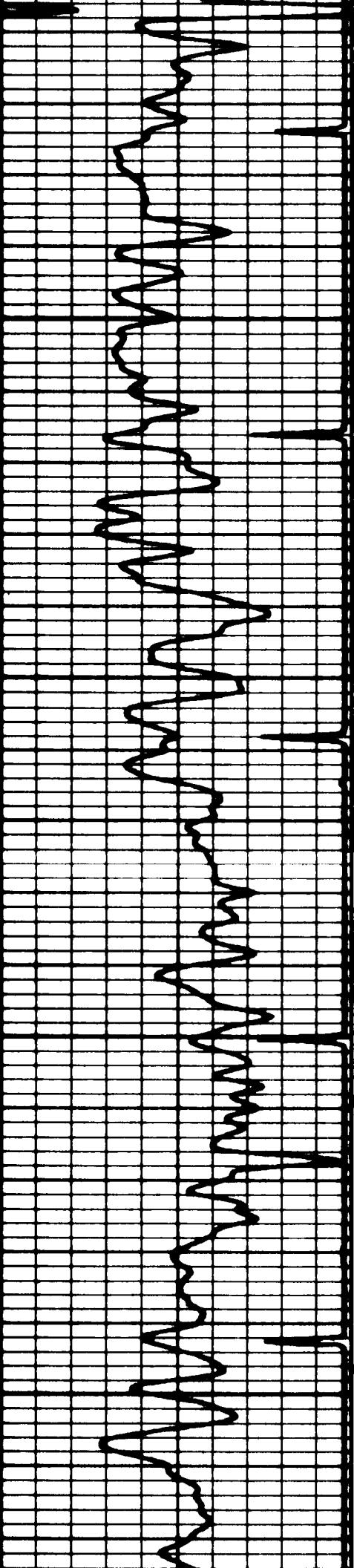
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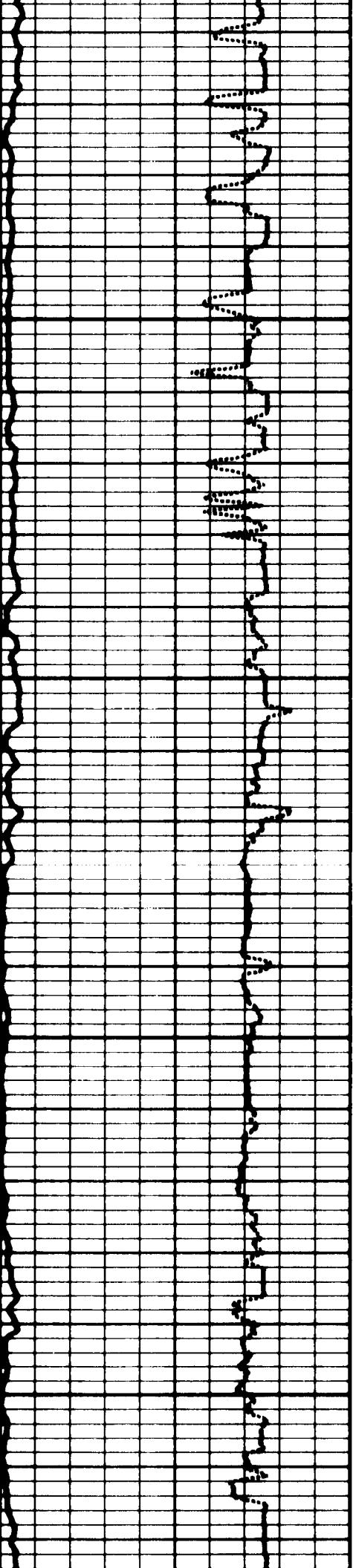
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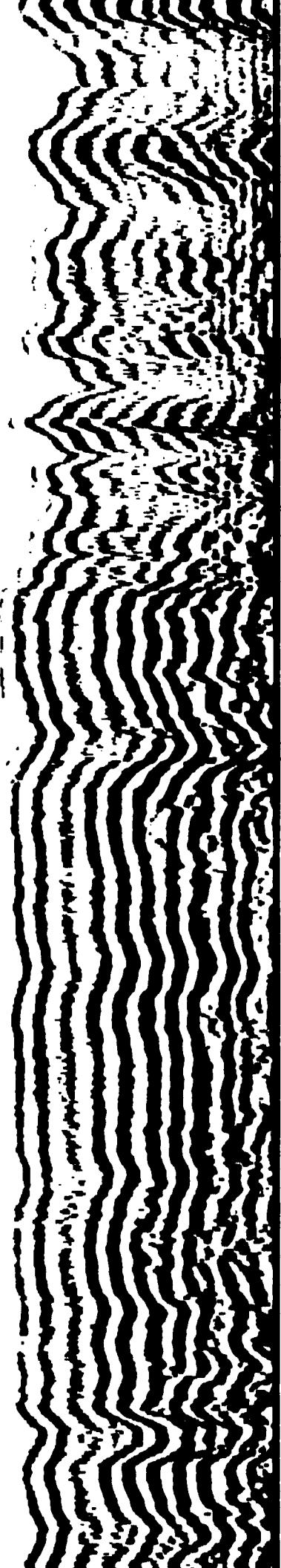


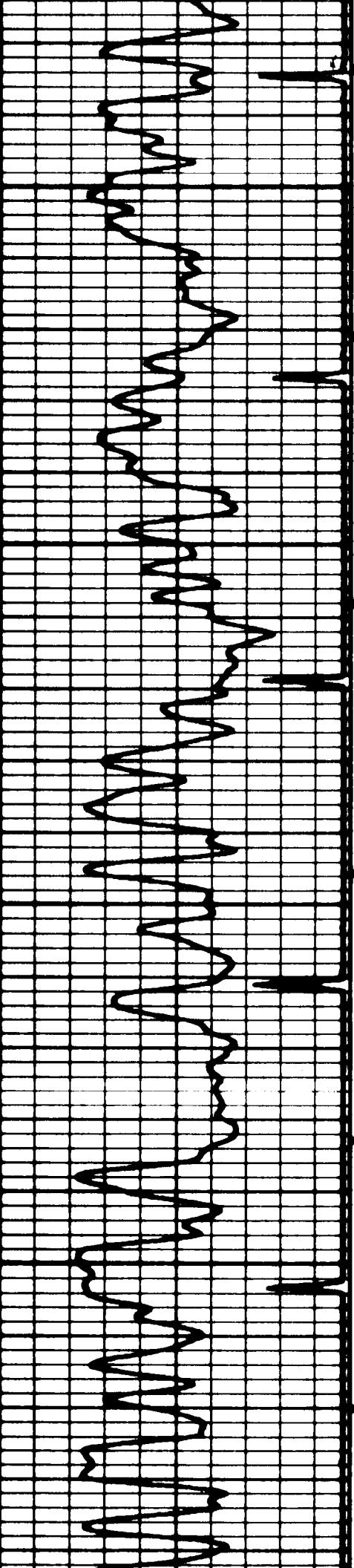


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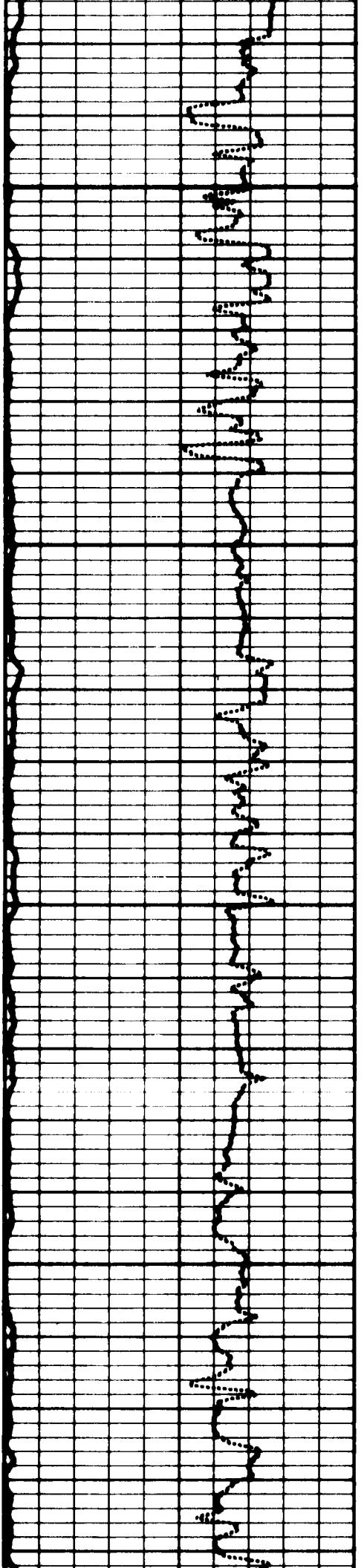


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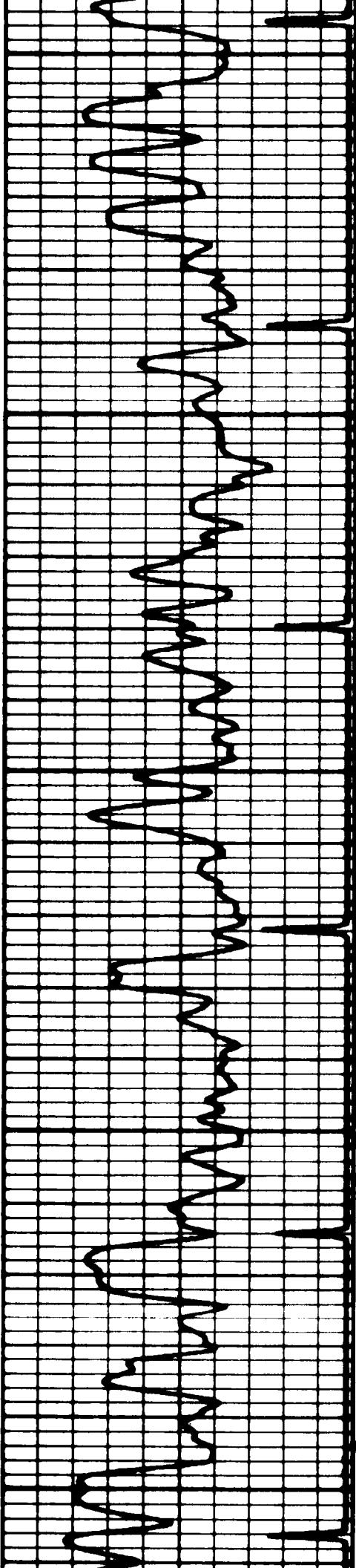


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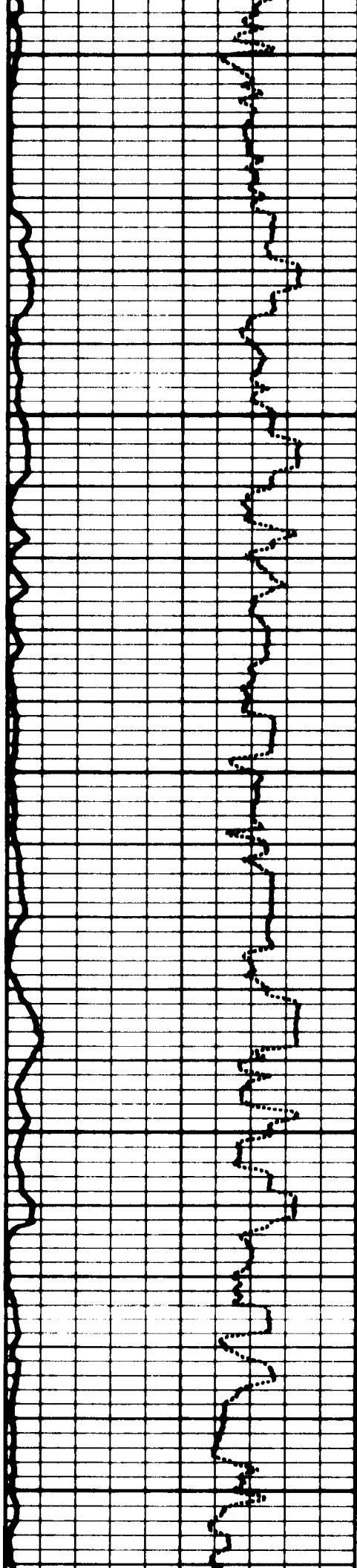


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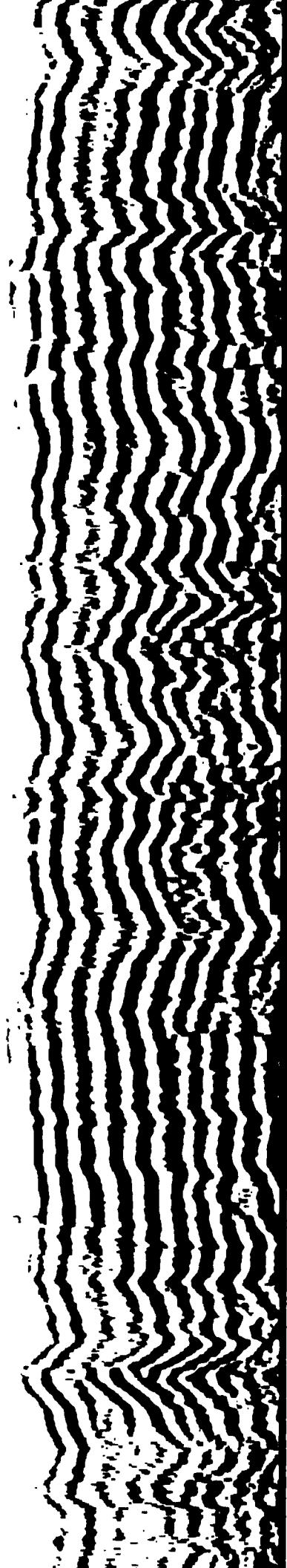




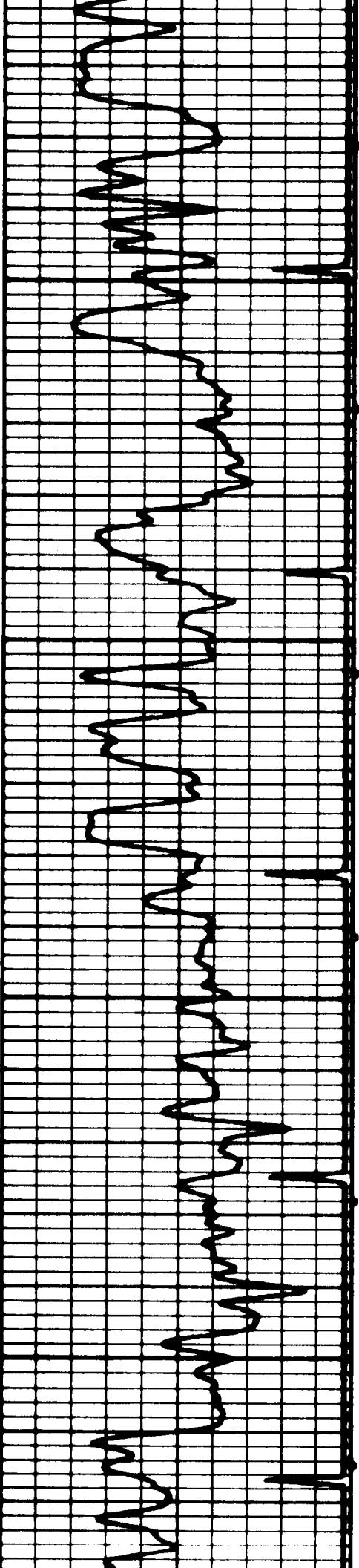
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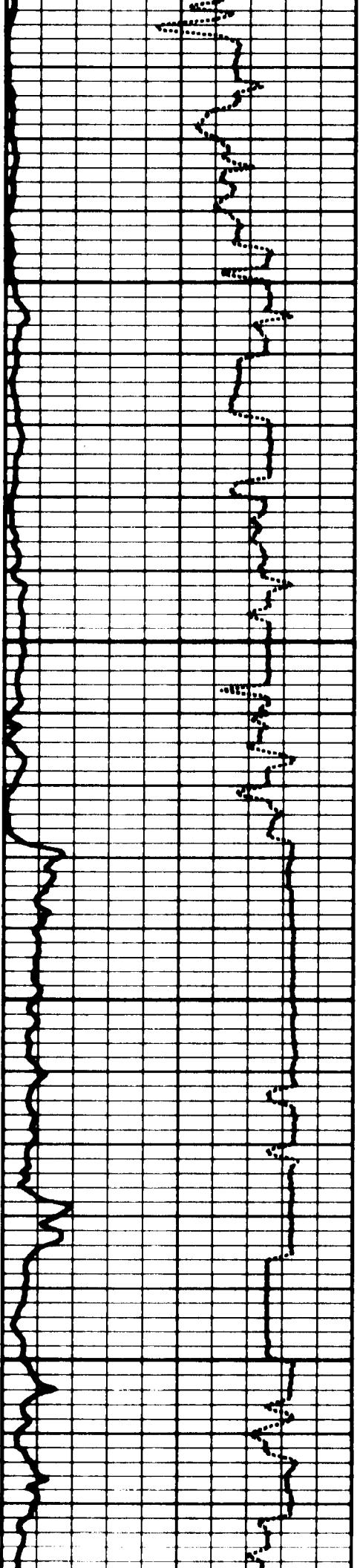
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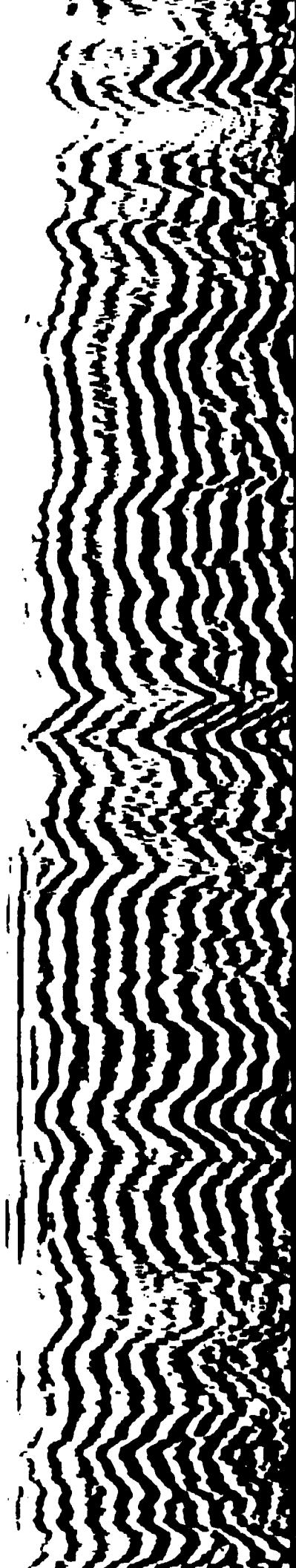
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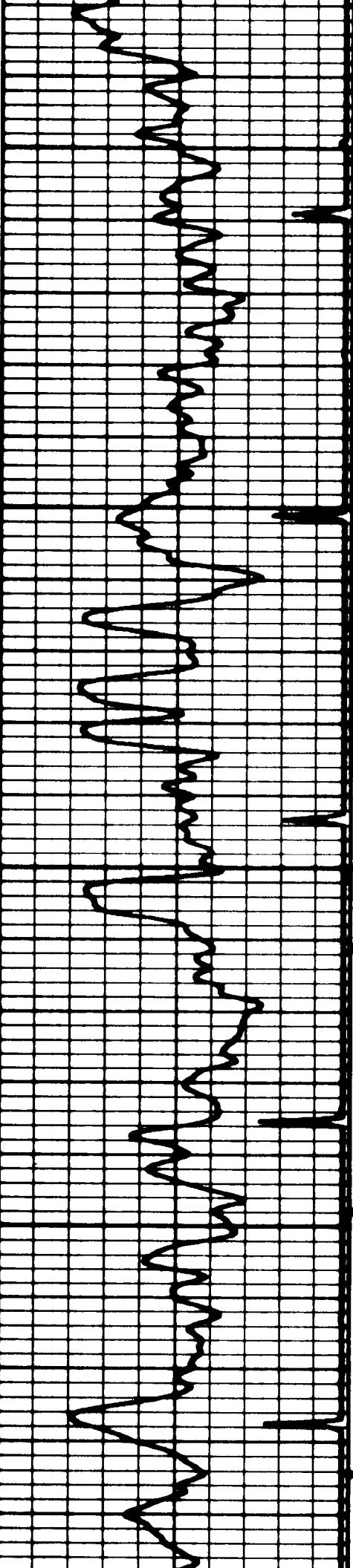


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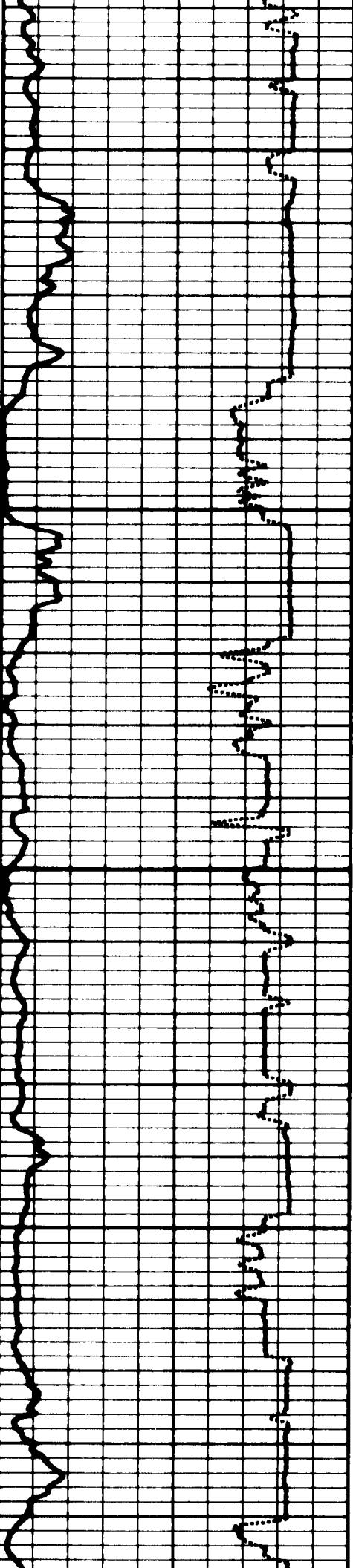


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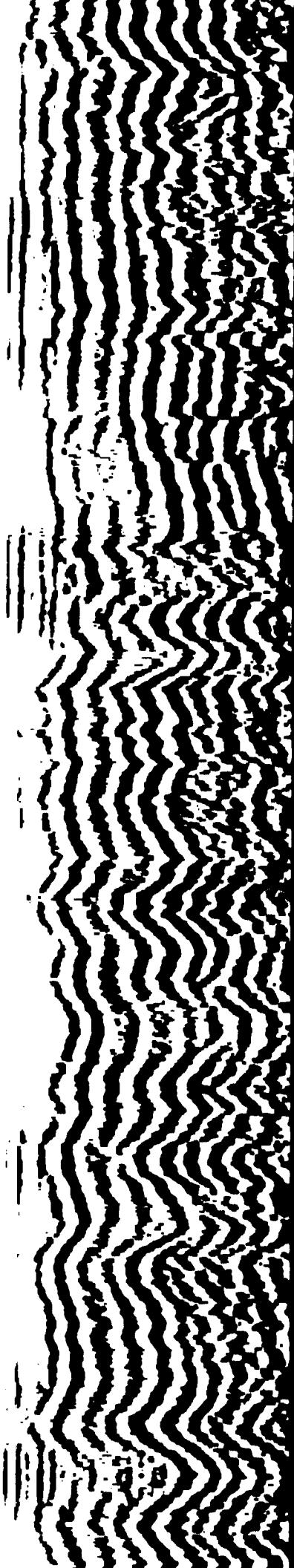


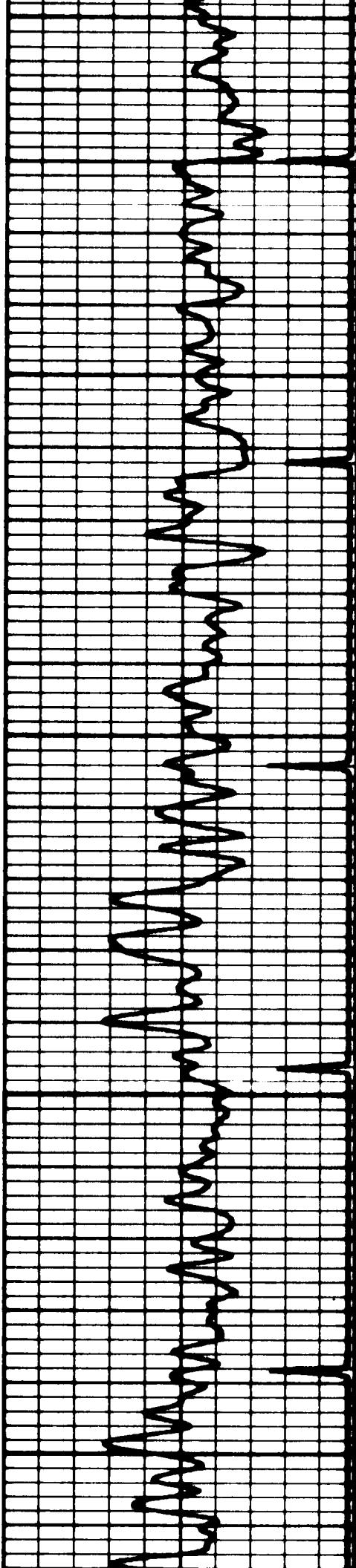


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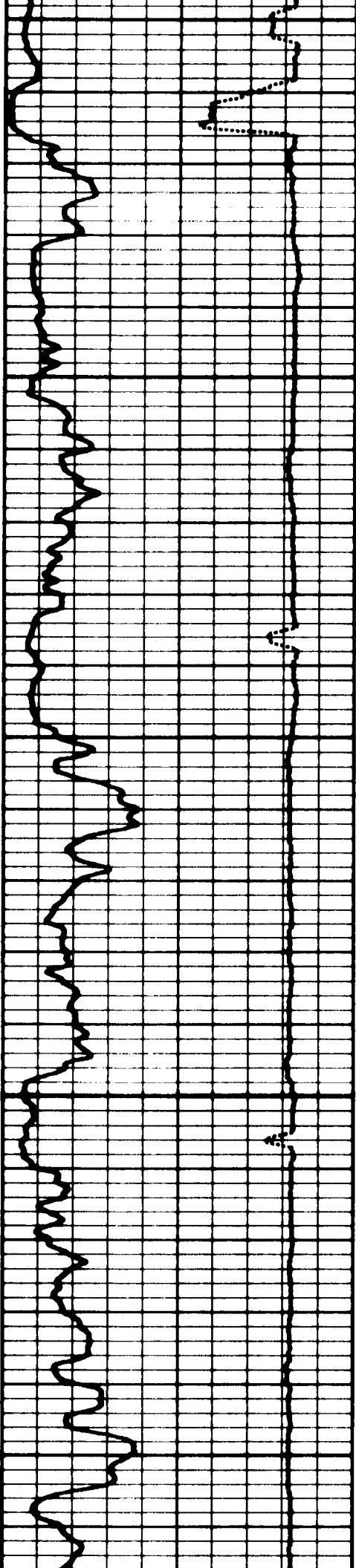


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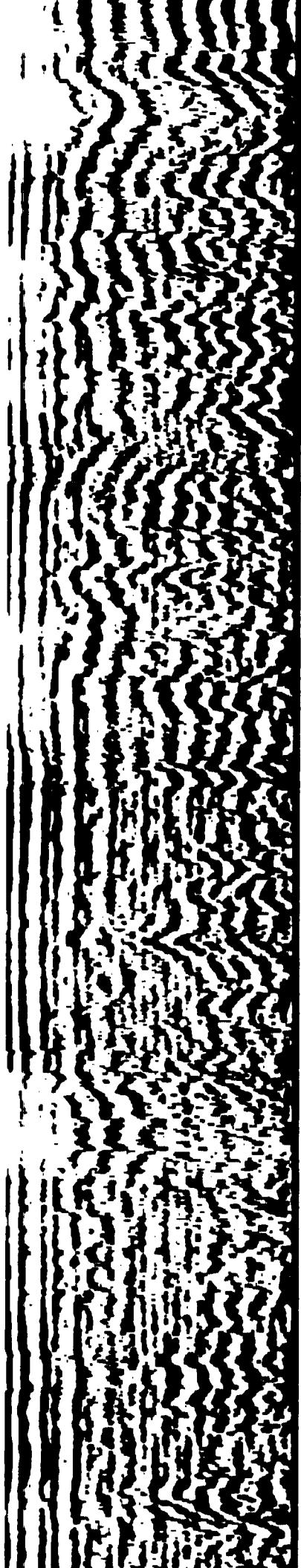


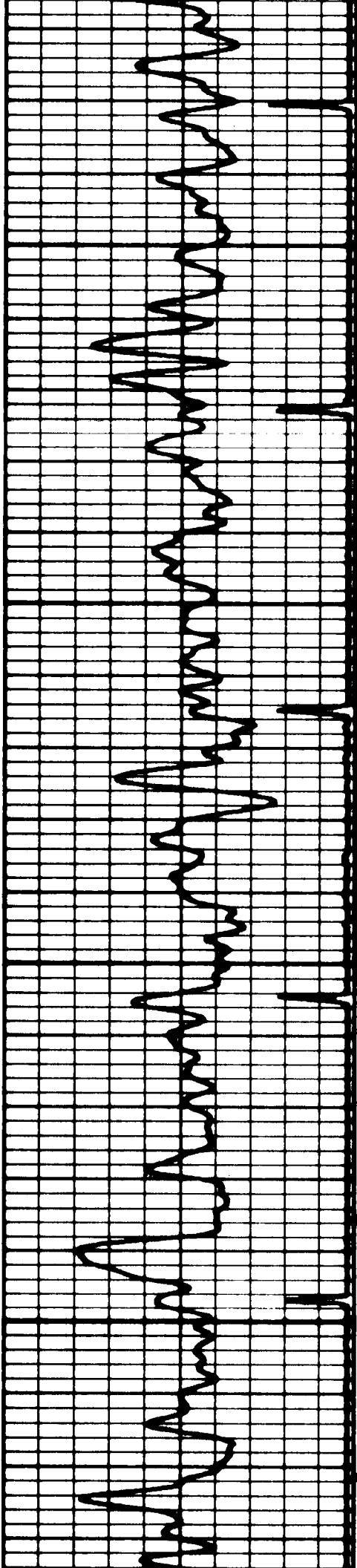


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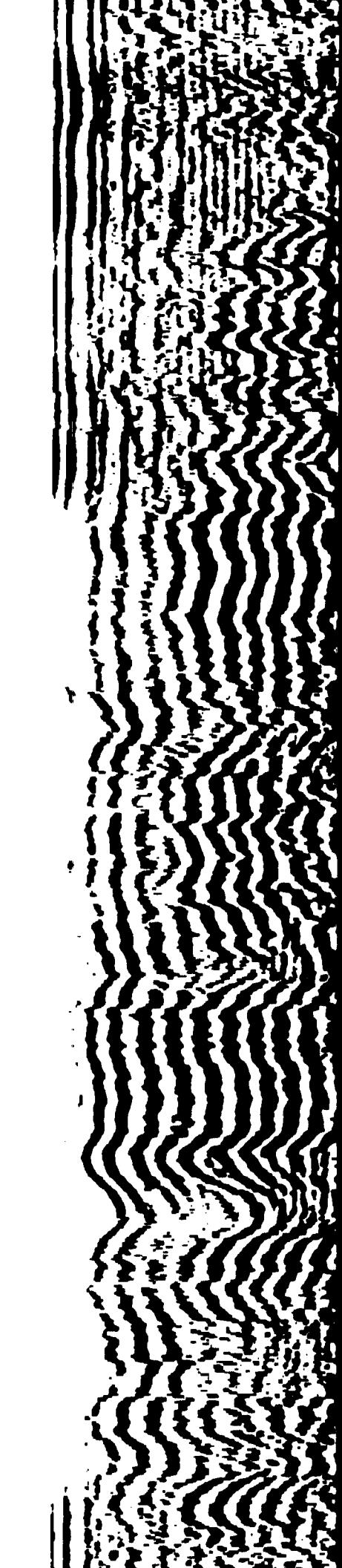
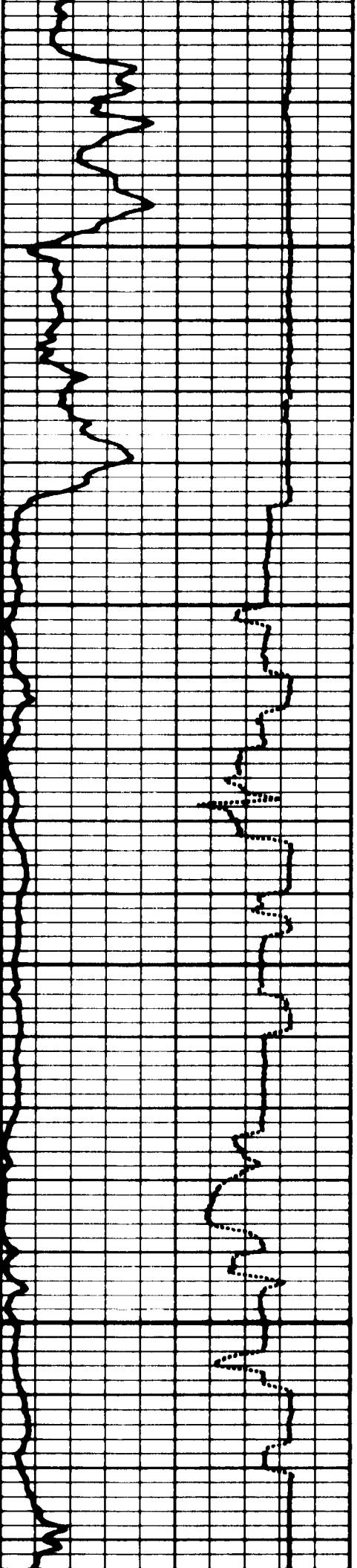
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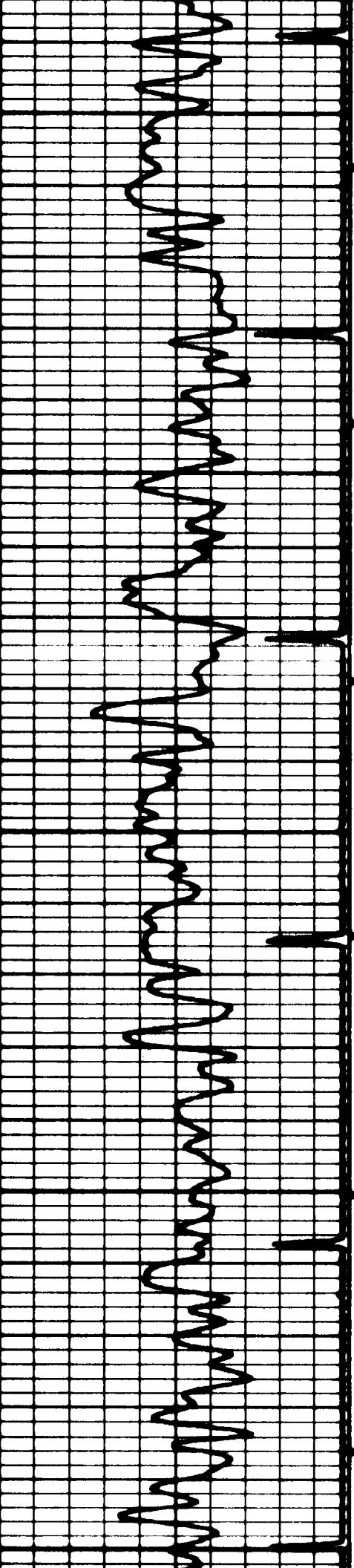




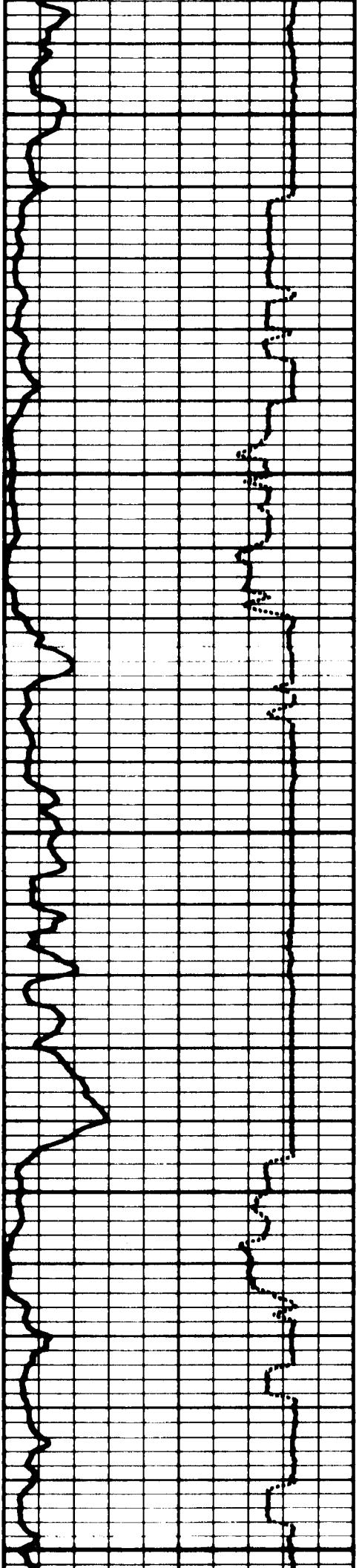
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04500





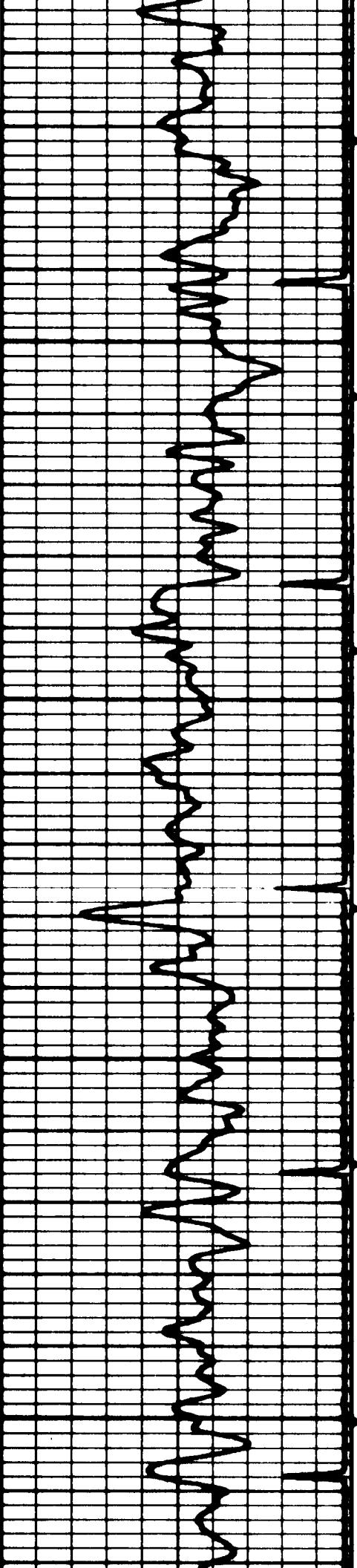
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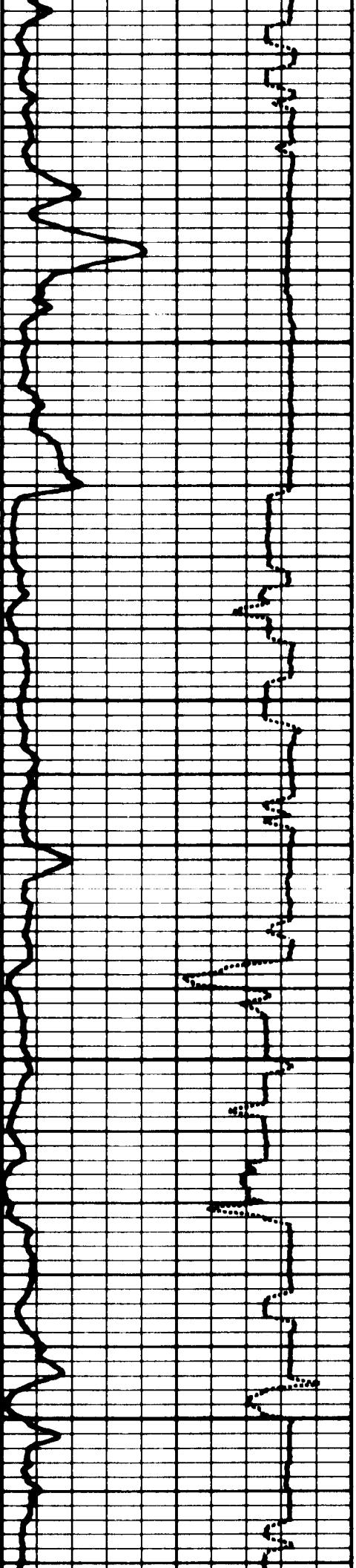


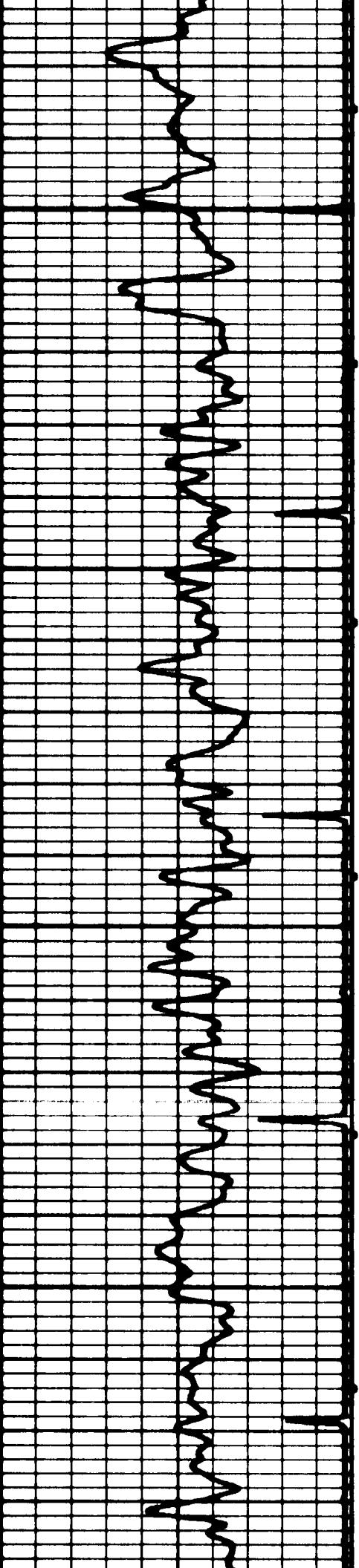
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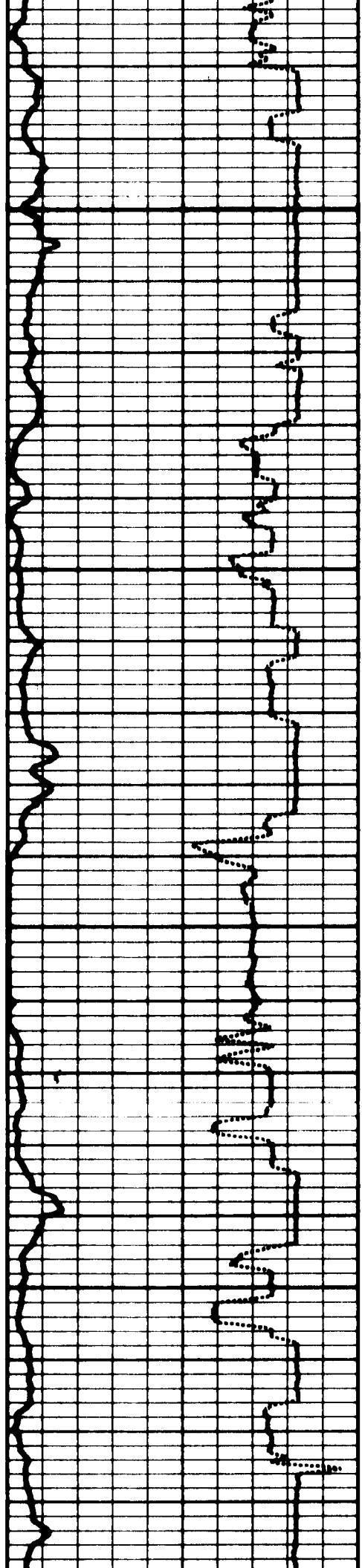
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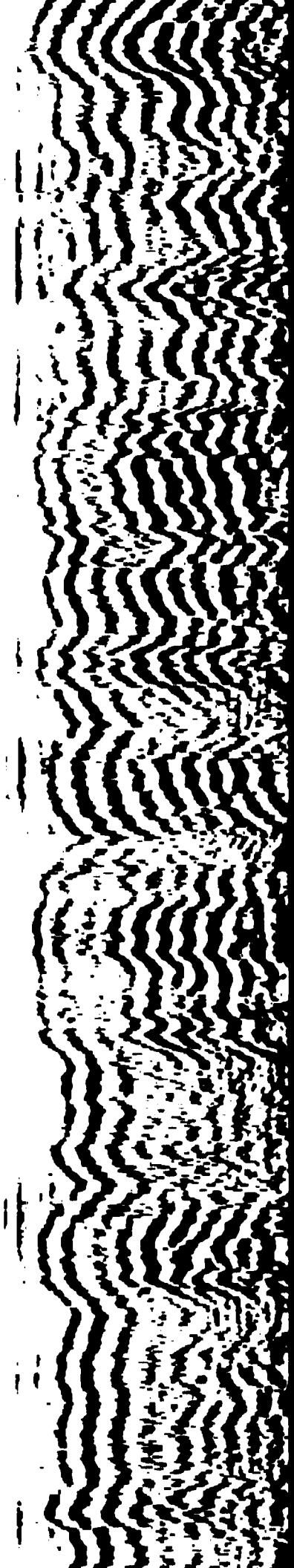


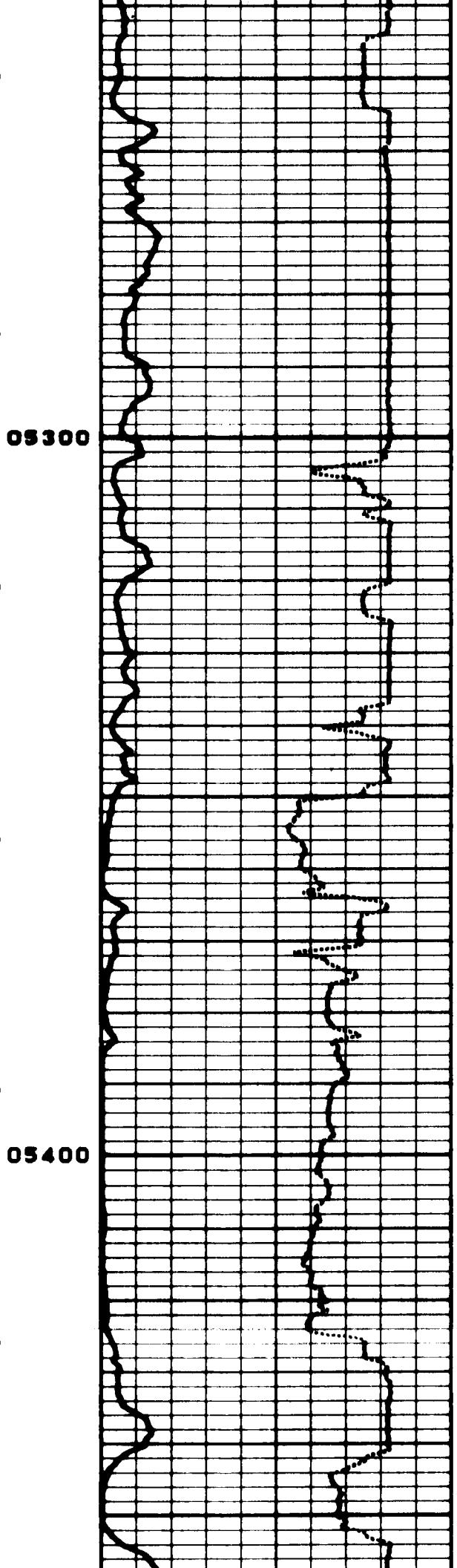
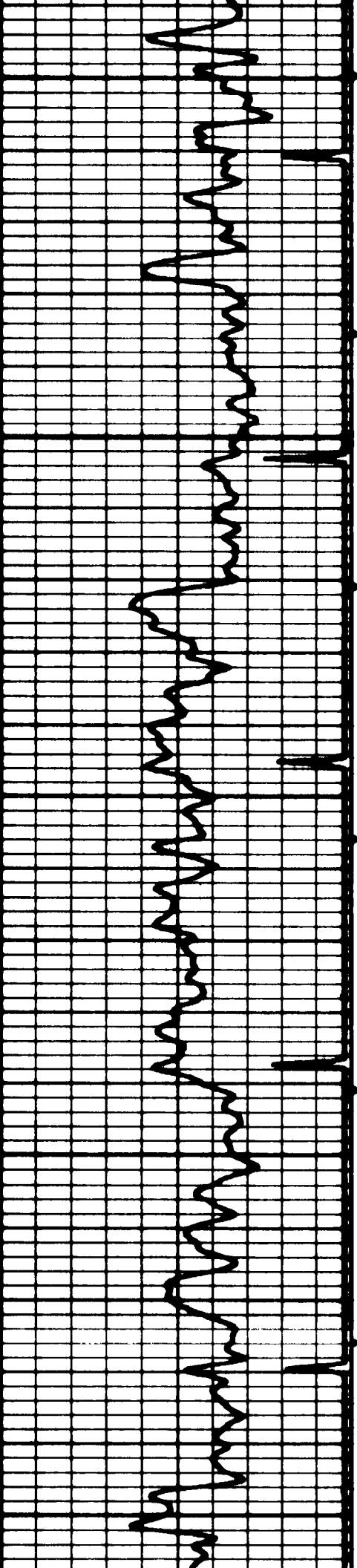


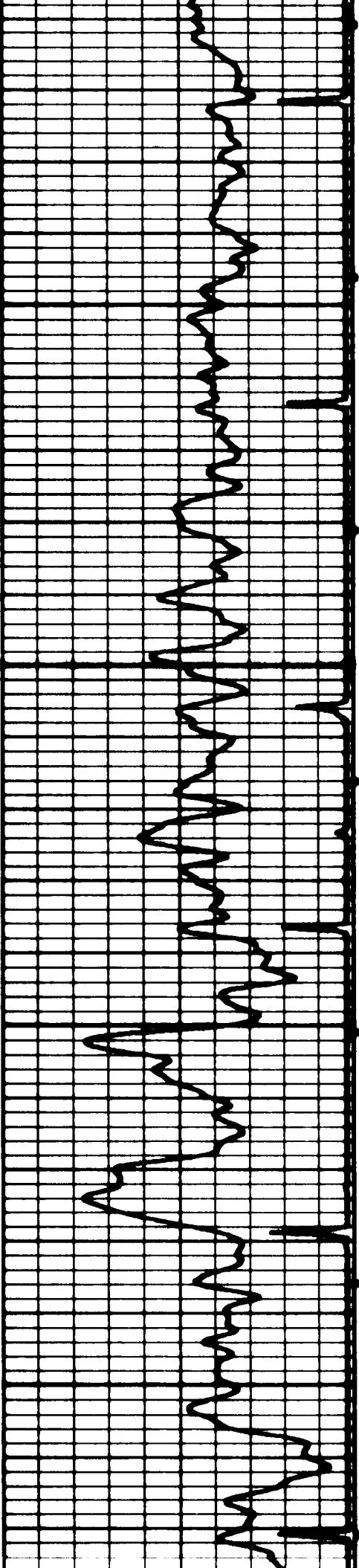
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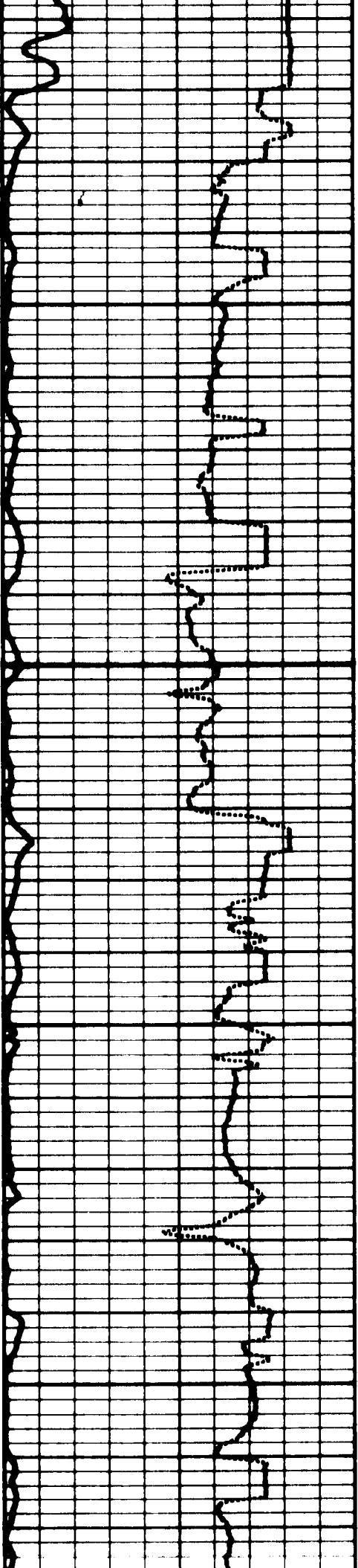
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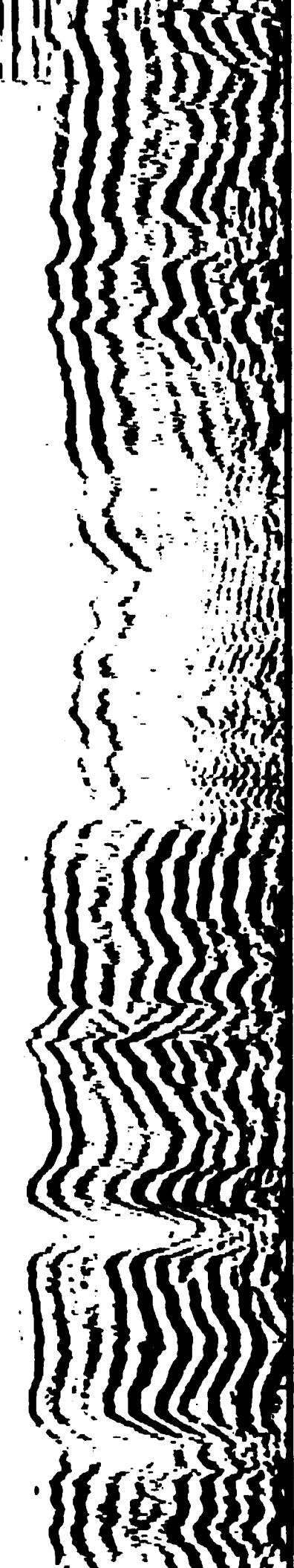


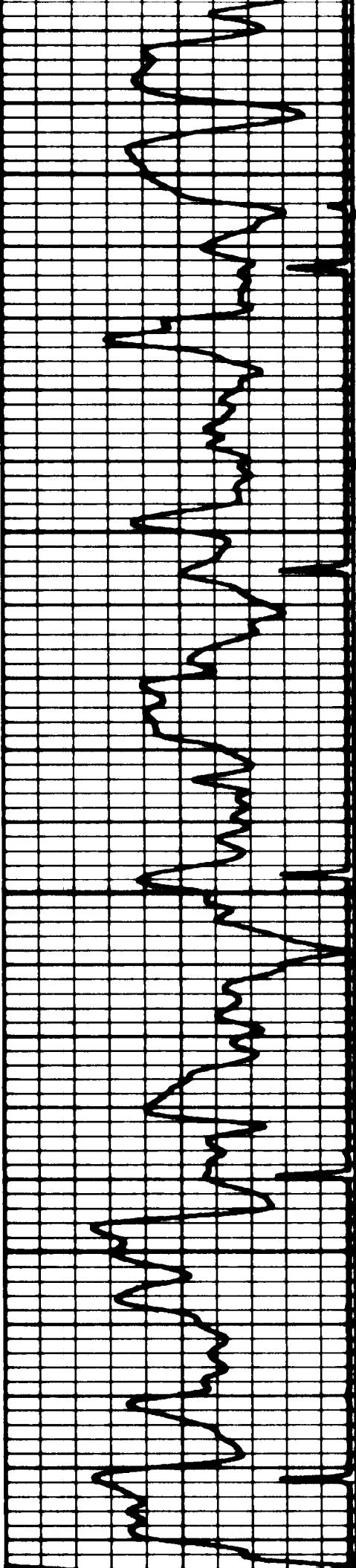


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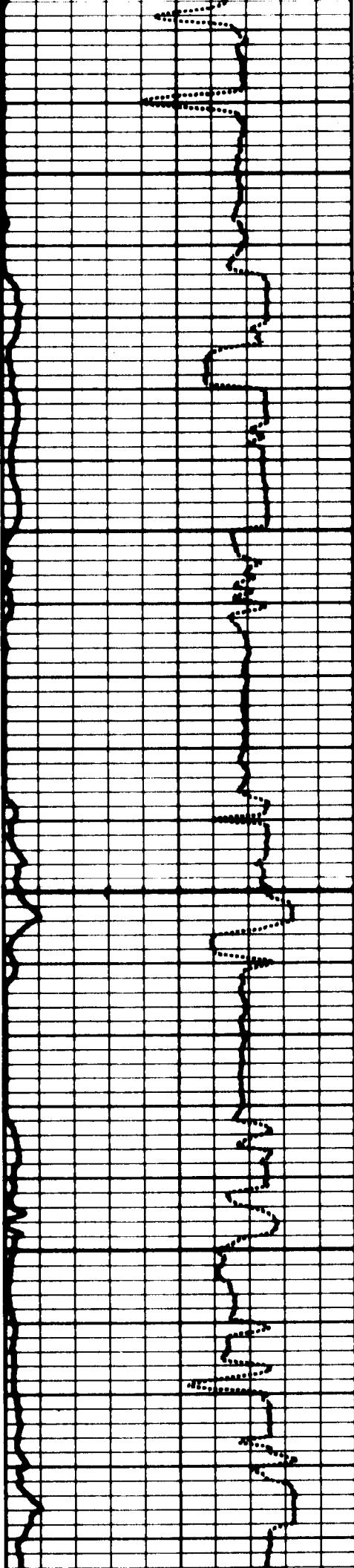


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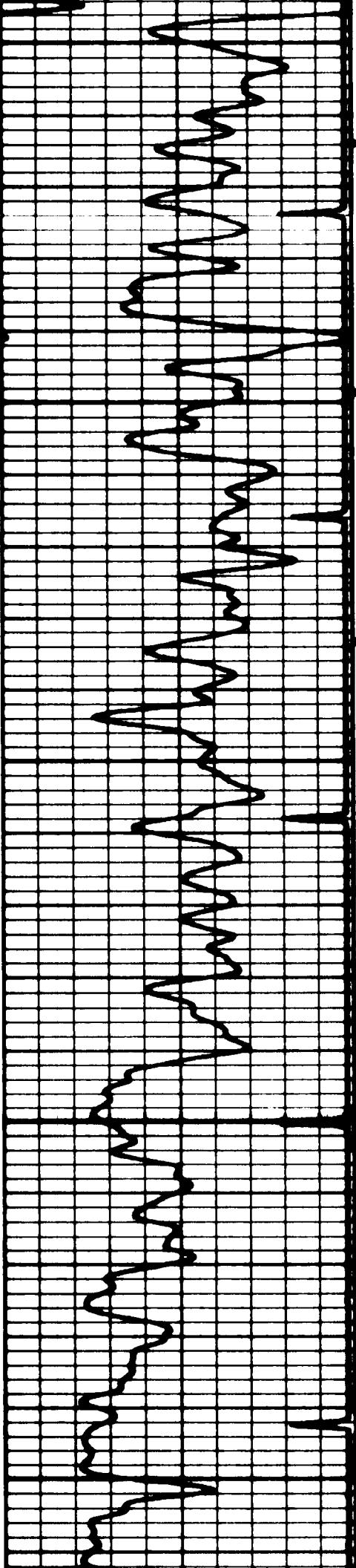


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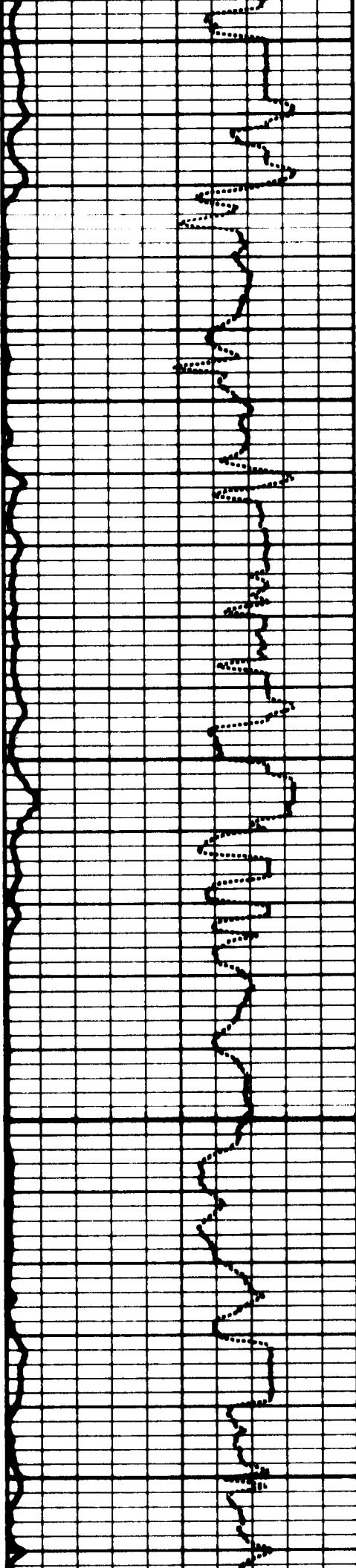


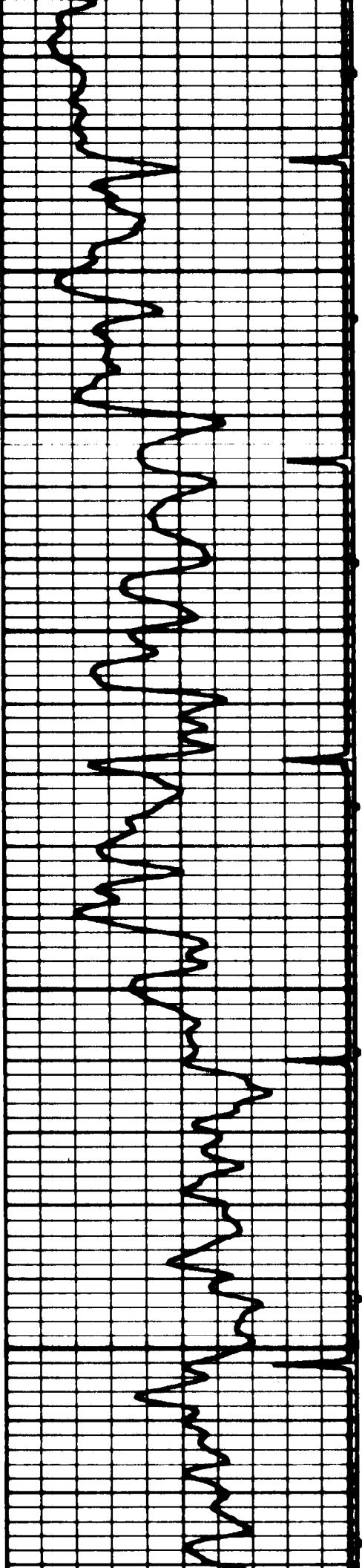


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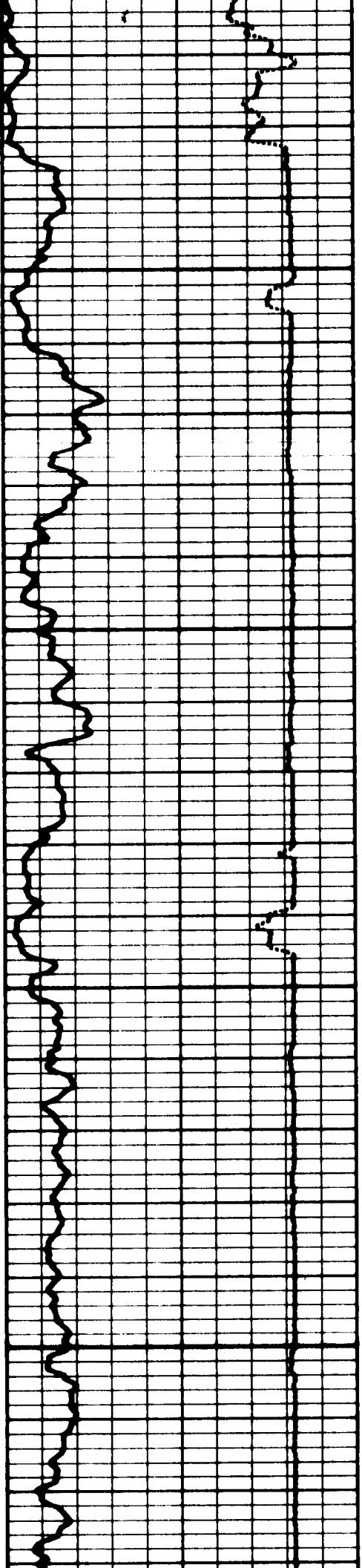
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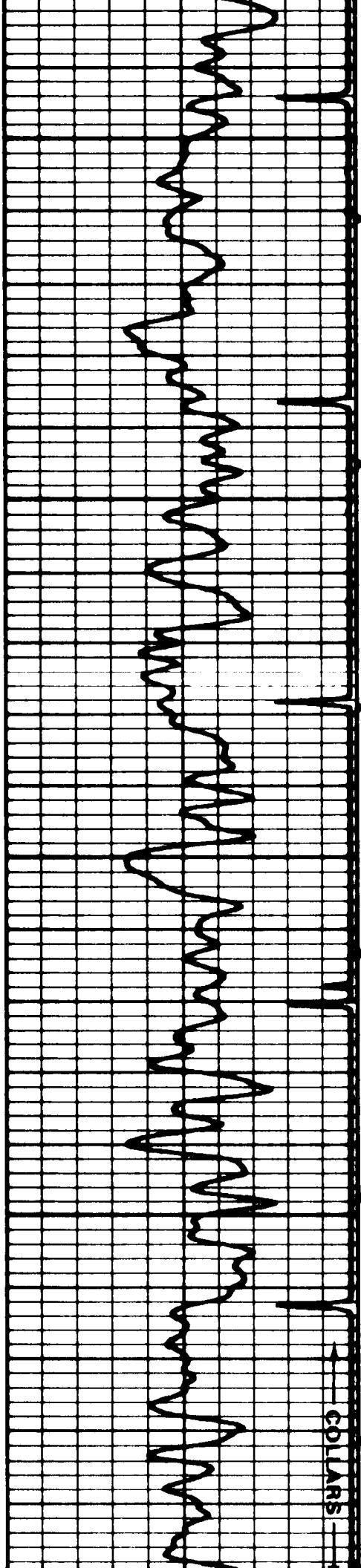


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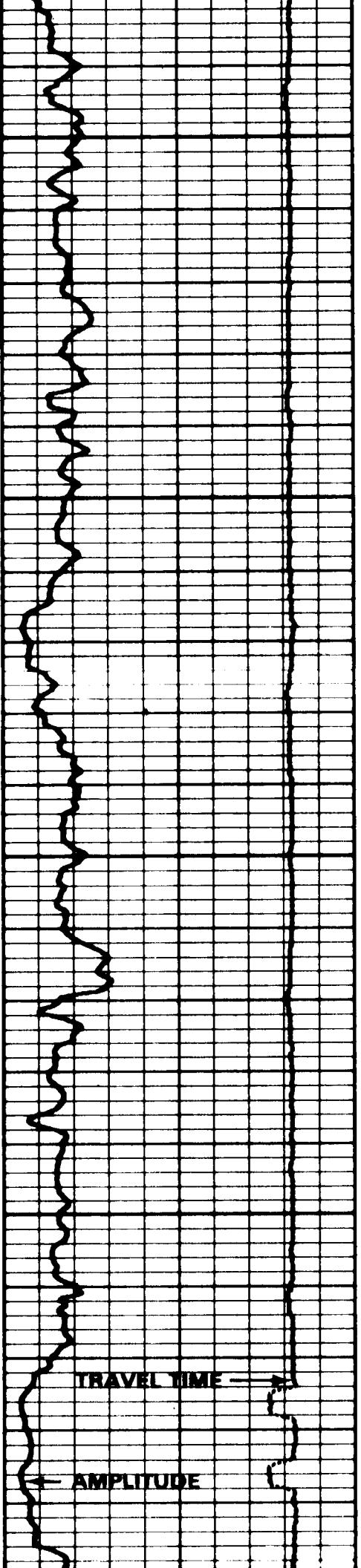


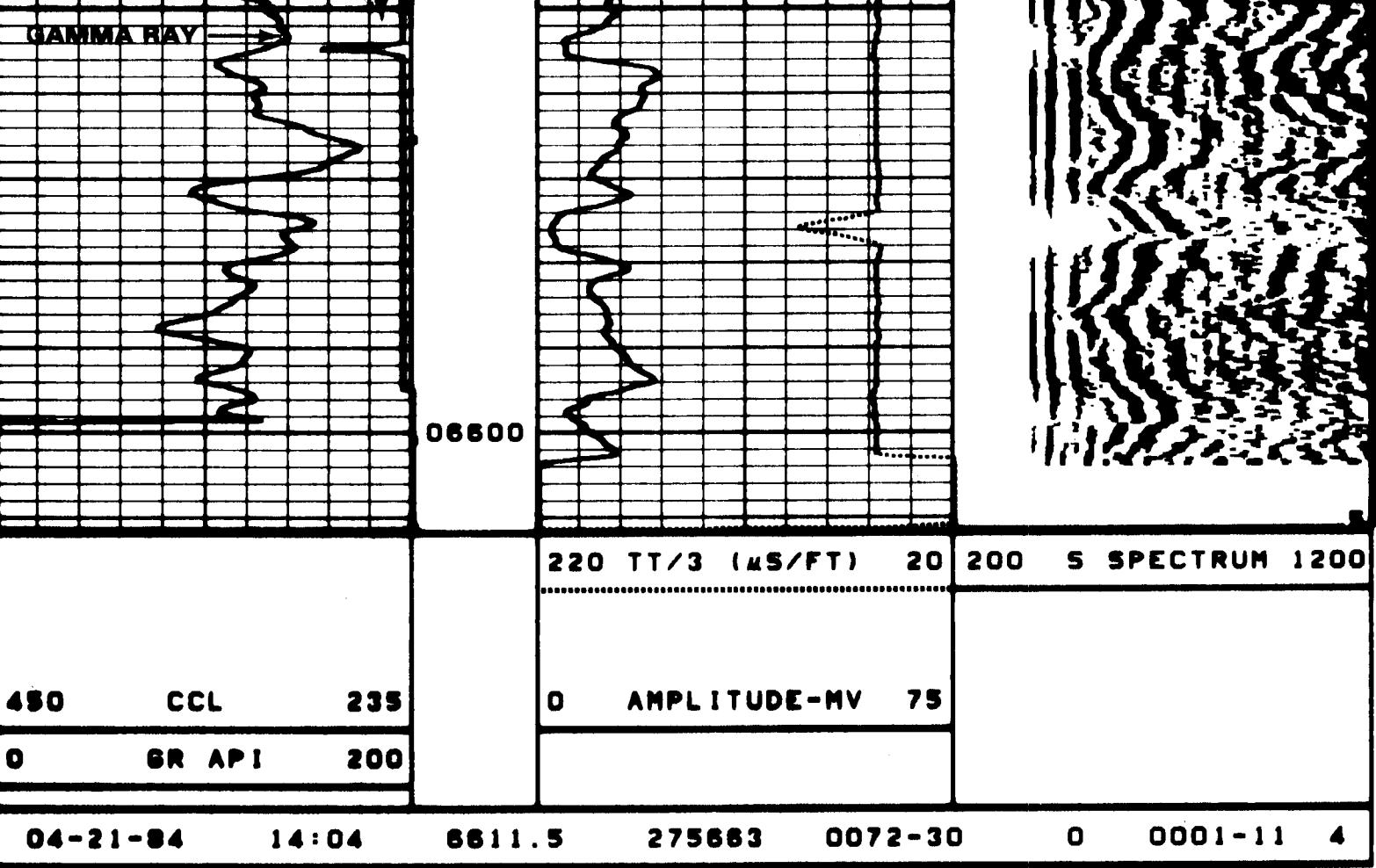


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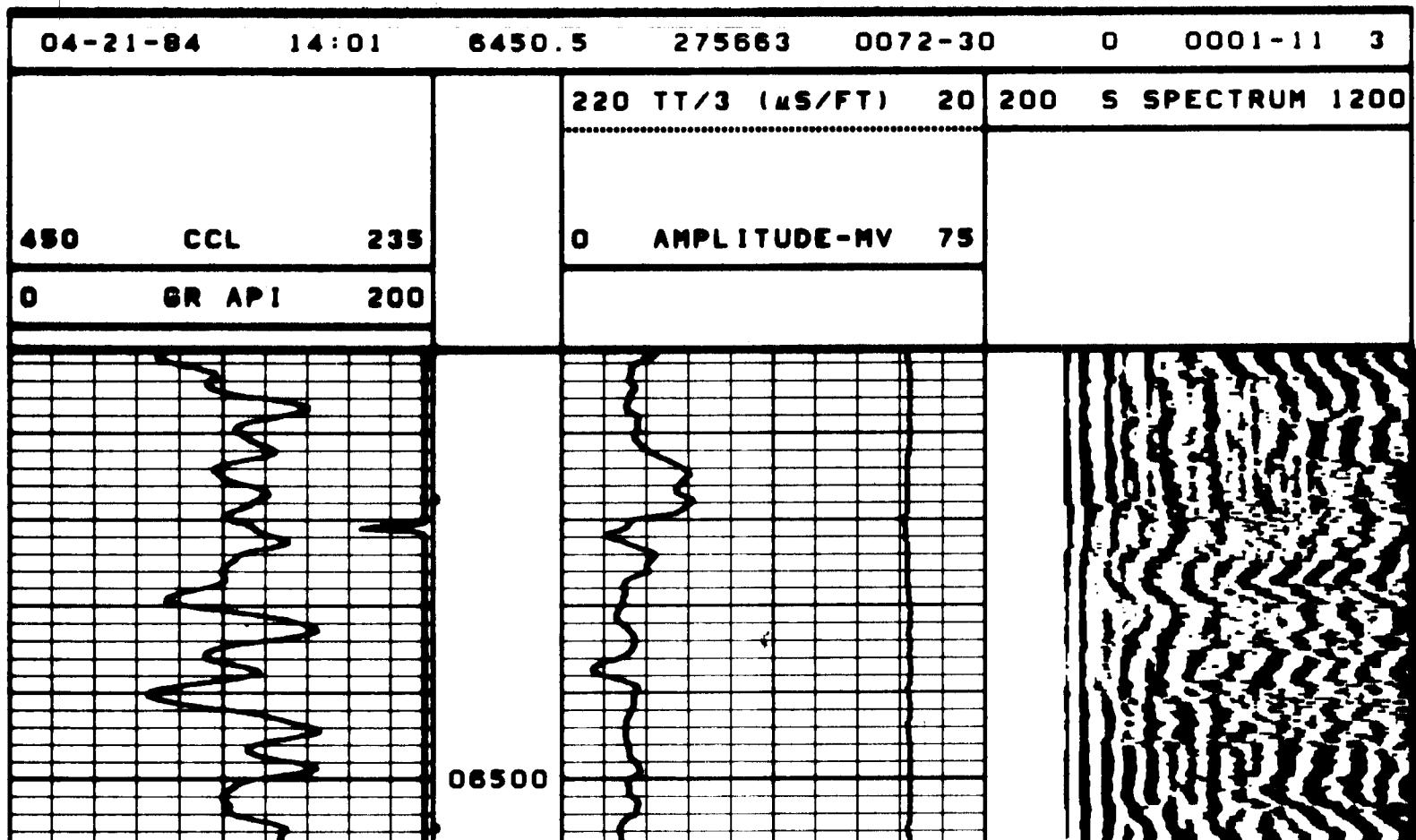
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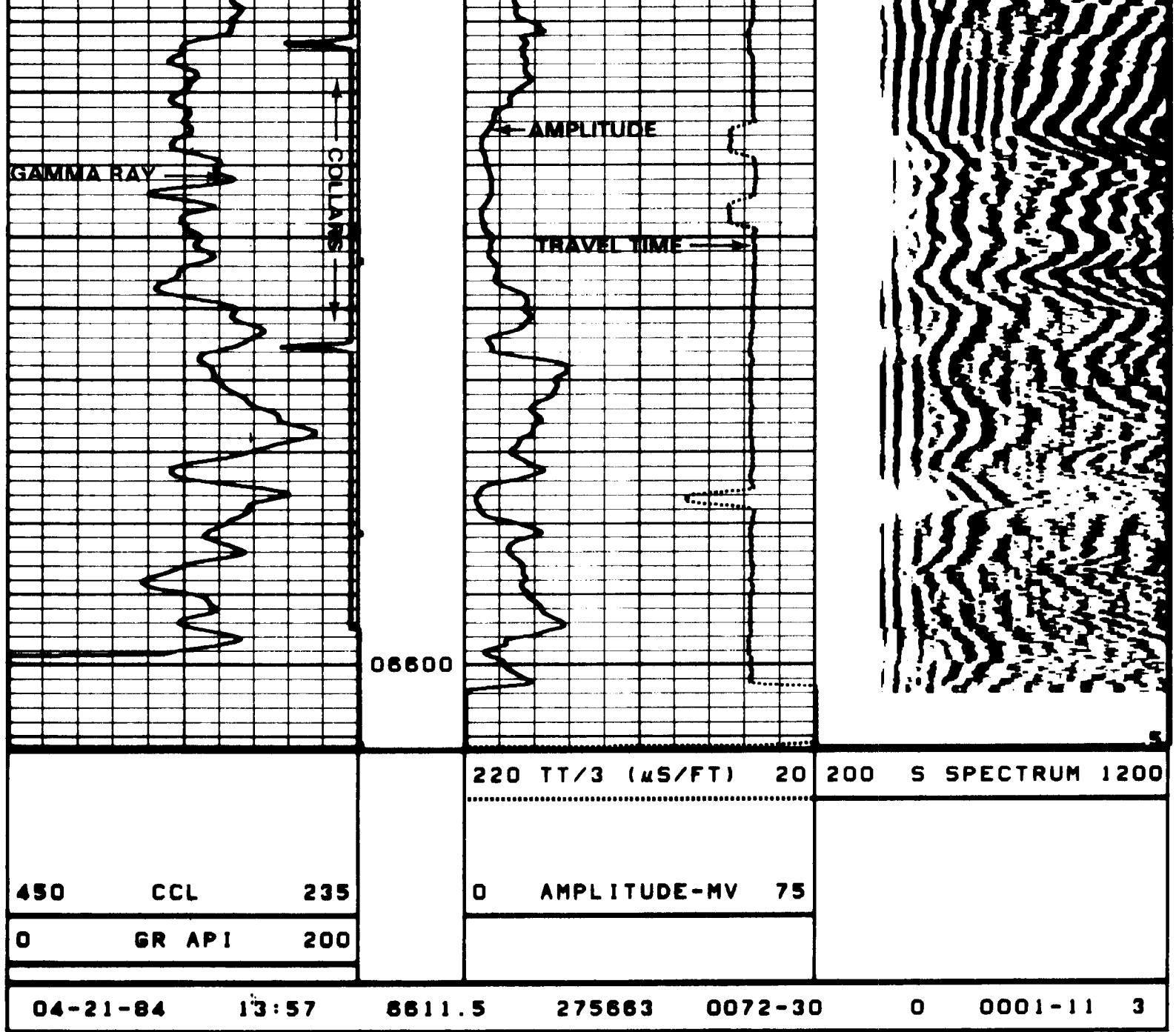
50 M/S



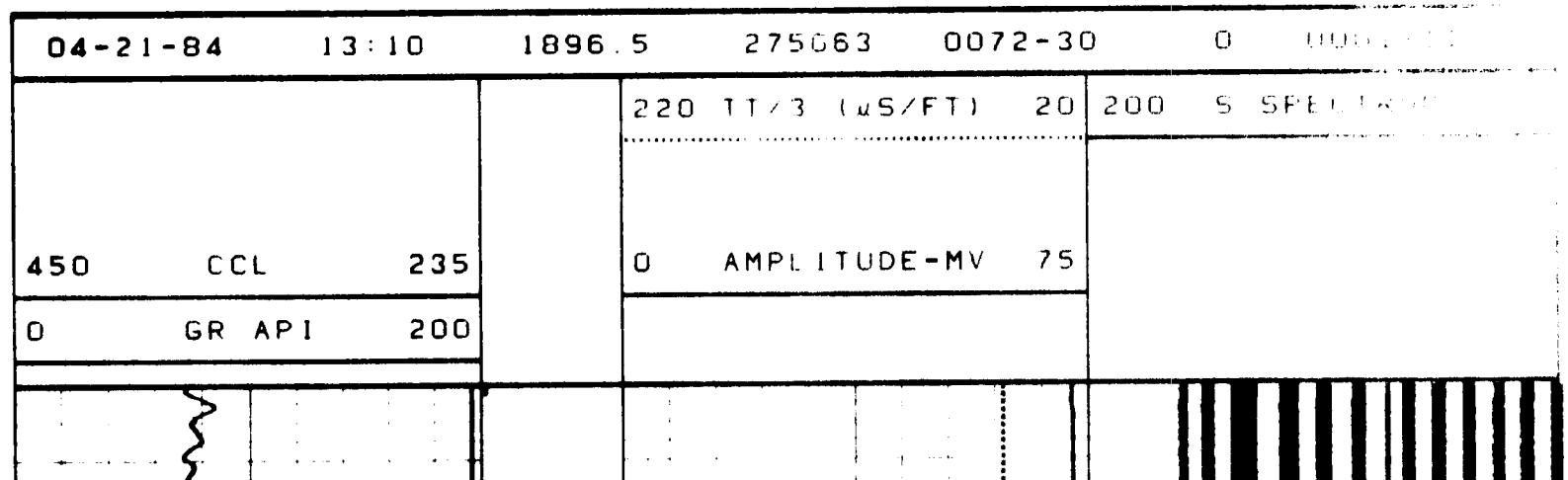


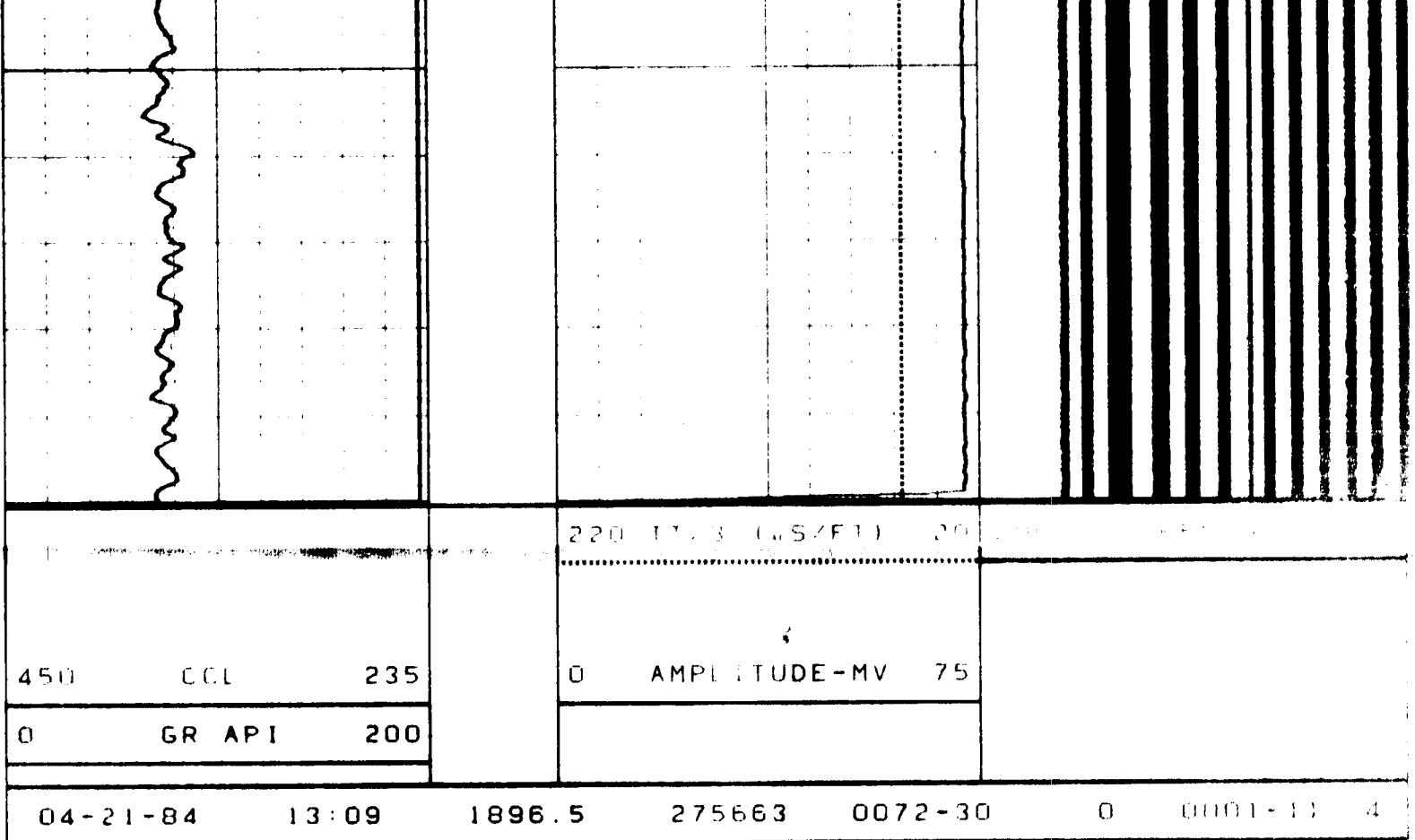
REPEAT SECTION



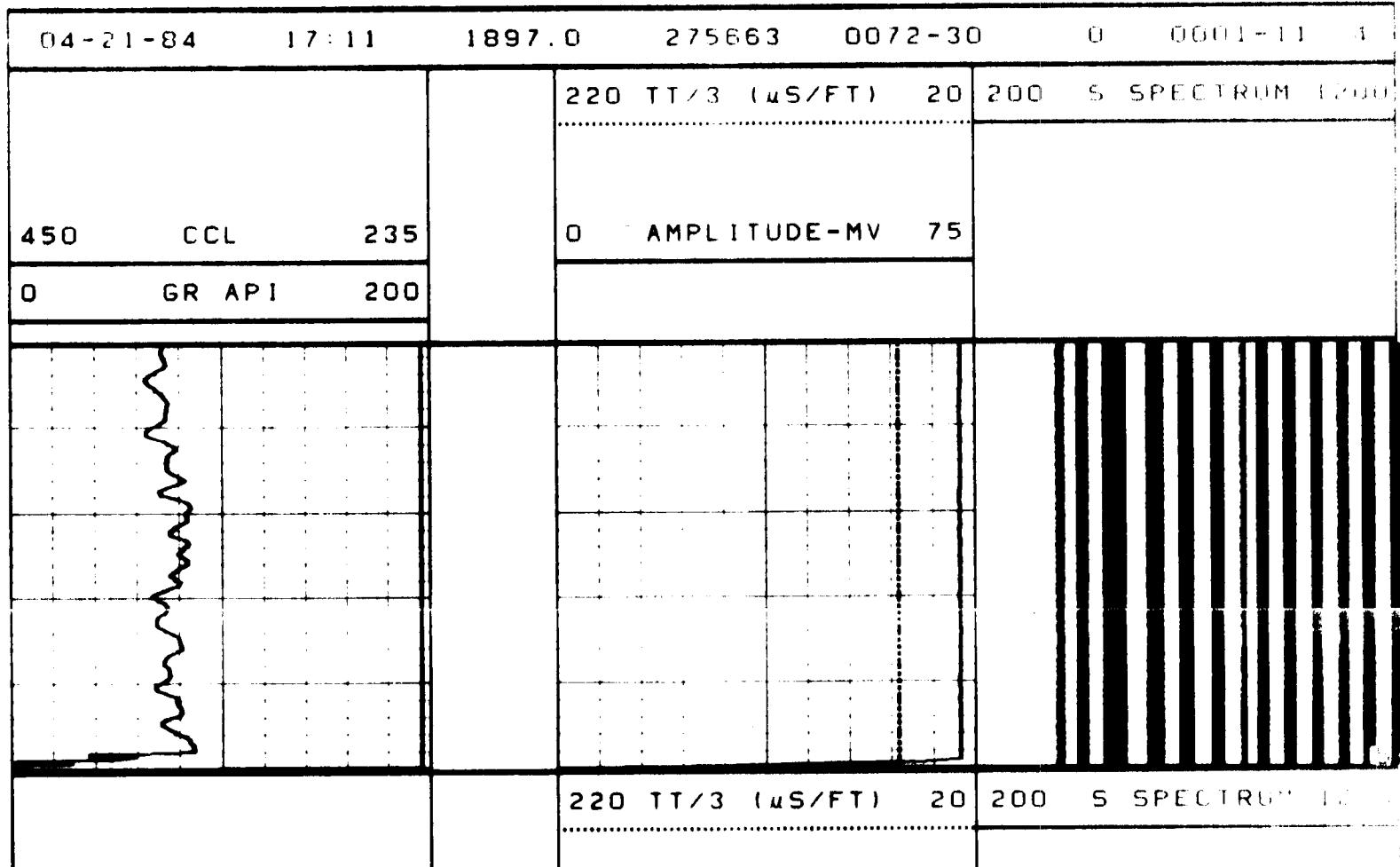


CALIBRATION BEFORE SURVEY





CALIBRATION AFTER SURVEY



450

CCL

235

0

AMPLITUDE-MV

75

0

GR API

200

04-21-84

17:11

1897.0

275663

0072-30

0

0001-11

4

ATTACHMENT NO. 8

OPEN HOLE LOG FOR THE UIC WELL

GEARHART

COMPENSATED
DENSITY LOG

FILING NO.	COMPANY COORS ENERGY COMPANY RECEIVED						
259980	WELL	UTE TRIBAL NO.	2-20	JUL 12 1984			
	FIELD	UTE TRIBAL	COLOR. OIL & GAS CONS. COMM.				
	COUNTY	DUCHESSNE	STATE	UTAH			
	LOCATION	1980' FNL & 43-013-308821	SW/NE				
	SEC	20	TWP	5S	RGE	3W	
	G.L.	K.B.	Elev.	6404'			
	Log Measured from	K.B.					
	Drilling Measured from						
Date	4-14-84						
Run No.	ONE						
Depth - Driller	6694'						
Depth-Logger	6693'						
Bottom logged interval	6692'						
Top logged interval	398'						
Type fluid in hole	CLEAR	KCL	BRINE				
Density	Visc.	8.06	27				
pH	Fluid Loss	8.5	-				
Max rec. temp., deg F.		154	°F				
Source of Samples	FLOWLINE						
Rm @ Meas. Temp.	.14	@	76 °F	@	°F	@	°F
Rmf @ Meas. Temp.	-	@	- °F	@	°F	@	°F
Rmc @ Meas. Temp.	-	@	- °F	@	°F	@	°F
Source Rm	Source Rmc	-	-				
Time	End Circulation	13:30	4-14-84				
Time	Logger on Bottom	22:21	4-14-84				
Recorded By	SLATKY, WACH						
Witnessed By	MR. BALLOU						
Bore-Hole Record							
Casing Record							
Run No.	B.R.	From	To	Size	Wgt.	From	To
ONE	12.25	SURFACE	400	85/8	24	SURFACE	400
TWO	7-7/8	400	6694	-	-	-	-

FOLD HERE

EQUIPMENT DATA

Run No.	Logging Unit	Location	Gamma Ray Tool No.	Compensated Density			
				Tool No.	Source No.	Source Type	Source Stg.
ONE	7571	VERNAL	3306	2506	CSV-704	CS-137	2CI

CALIBRATION DATA

Run No.	Gamma Ray		Compensated Density				Caliper		
	Bkg. cps	Std. cps	Magnesium		Aluminum		Test Block		
			LS	SS	LS	SS	LS	SS	L. Ring
ONE	160.5	688.3	1032.3	480.6	232.7	329.7	231.4	329.7	3666
									6964

LOGGING DATA

Run No.	General		Gamma Ray		Compensated Density			
	Depth		Speed FPM	TC	API PER LOG DIV.	TC	Matrix Density	Fluid Density
	From	To						
ONE	6692	398	30	AUTO	20	AUTO	2.68	1.0

REMARKS:

NOTICE: Gearhart Industries, Inc. cannot and does not guarantee the accuracy or correctness of any log data or of any interpretation thereof and shall not be liable or responsible for any loss, cost, damage or expense incurred or sustained by Customer resulting from any log data or interpretation made by Gearhart Industries, Inc. or any of its agents, servants or employees. Neither log data nor interpretation thereof should be relied upon as the sole basis for any drilling, completion, well treatment or production decision or any other procedure. Unless there is presently in effect a master or other specific or general contract intended to extend and apply hereto, this Log is provided in accordance with Gearhart Industries, Inc.'s General Terms and Conditions as set out in its current price schedule.

GEARHART INDUSTRIES, INC.

04-14-84

01:24

354.0

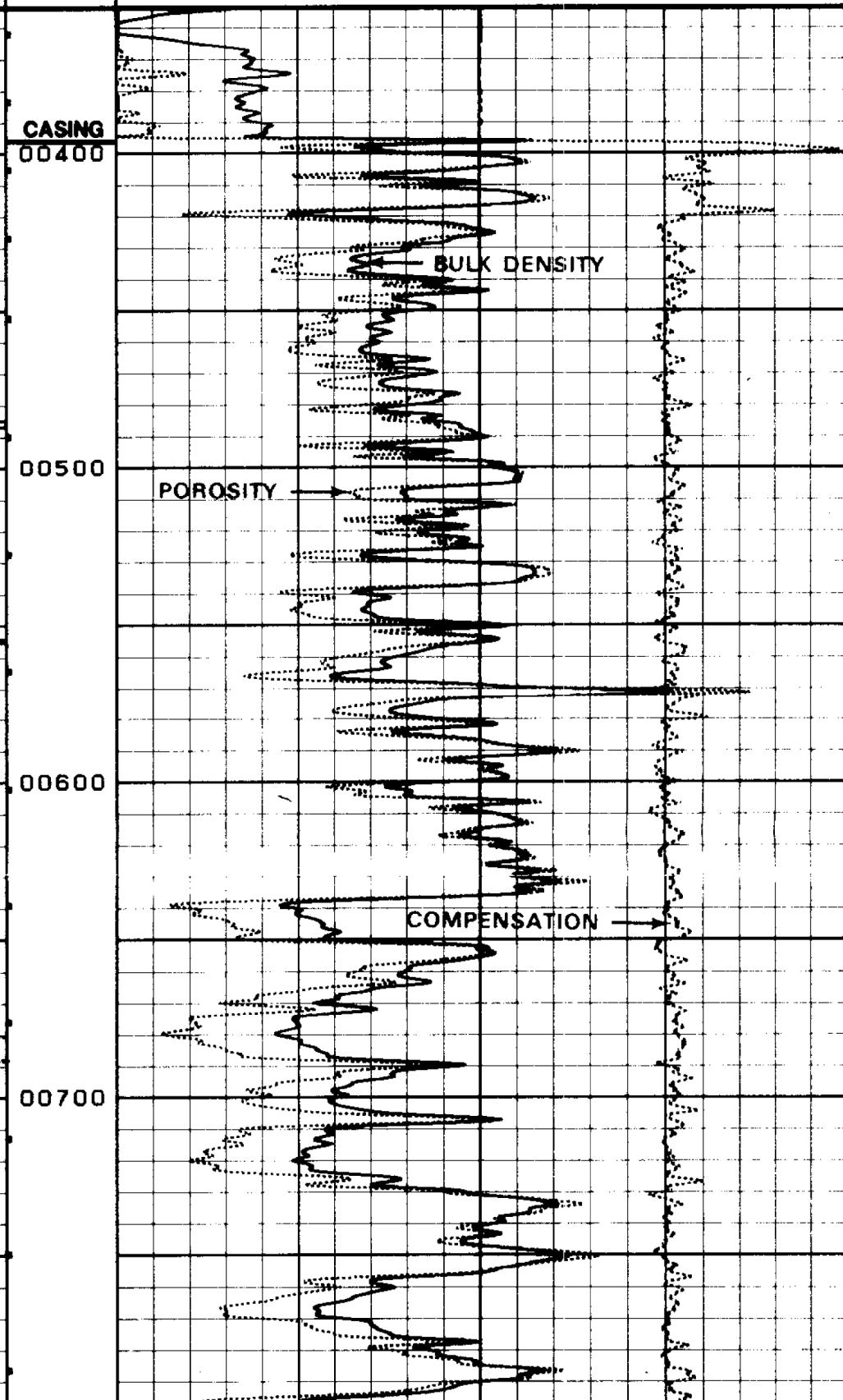
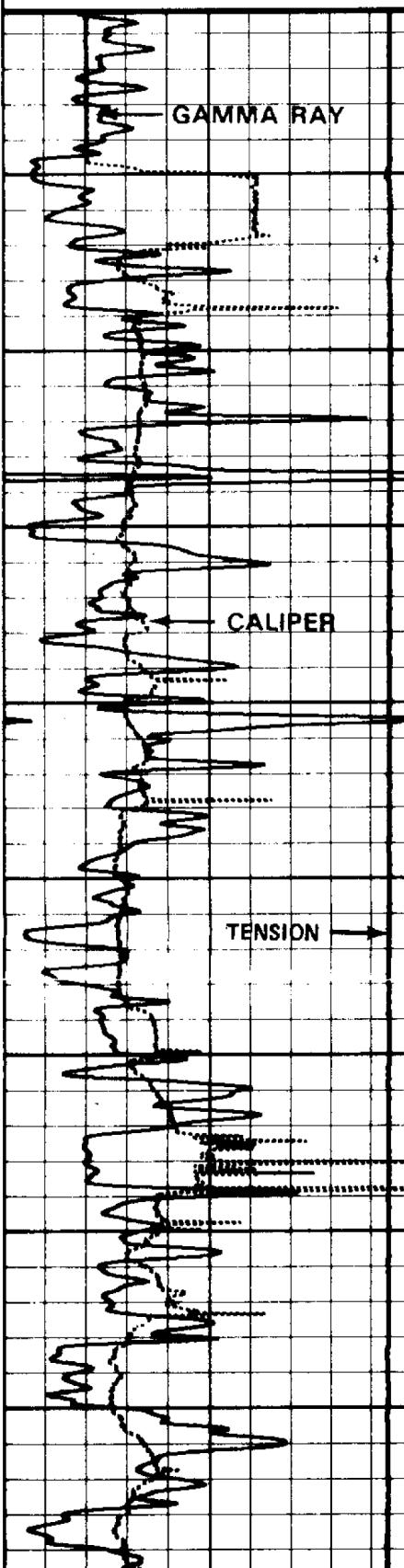
259980

0045-24

0

0001-19 3

				-0.25	ΔP	0.25
0	GR API	200	2.00	ρ (B)		3.00
6	CALIPER X	16	30	ϕ (CDL)		-10



00800

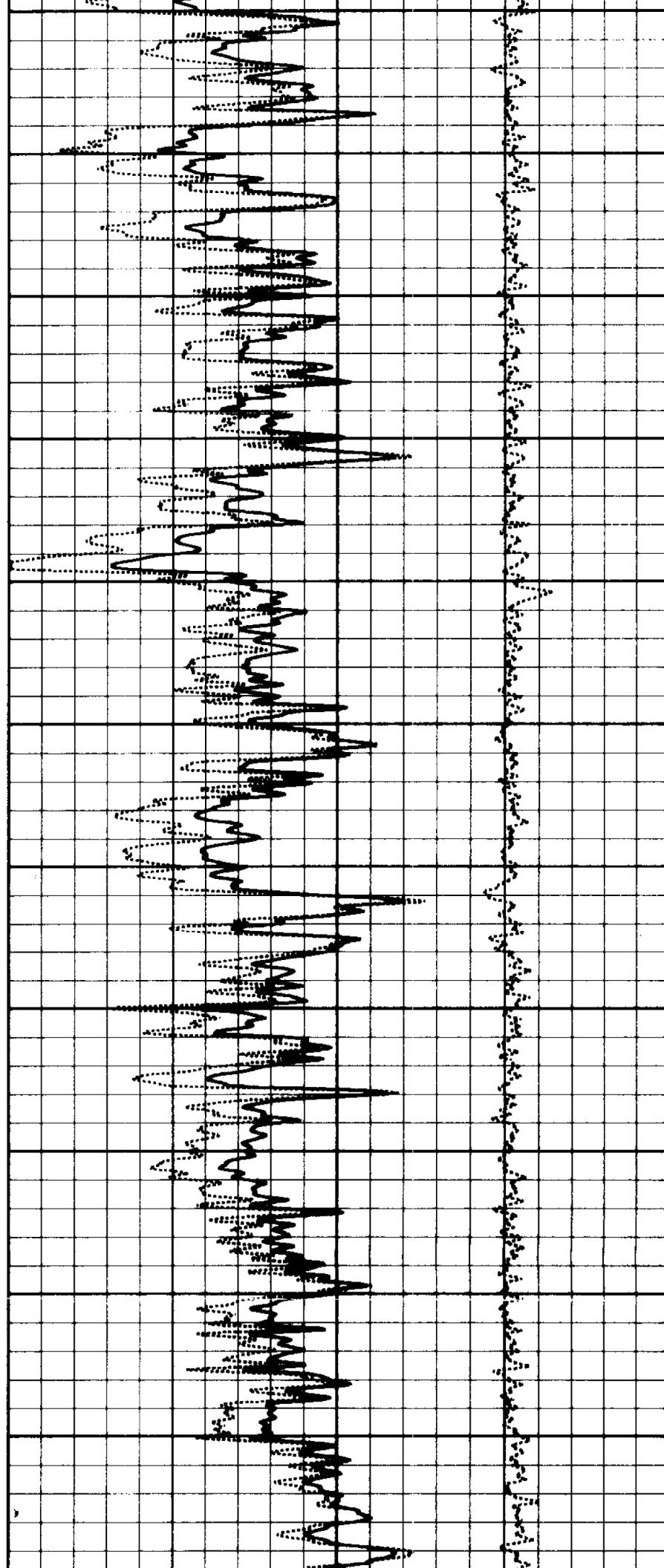
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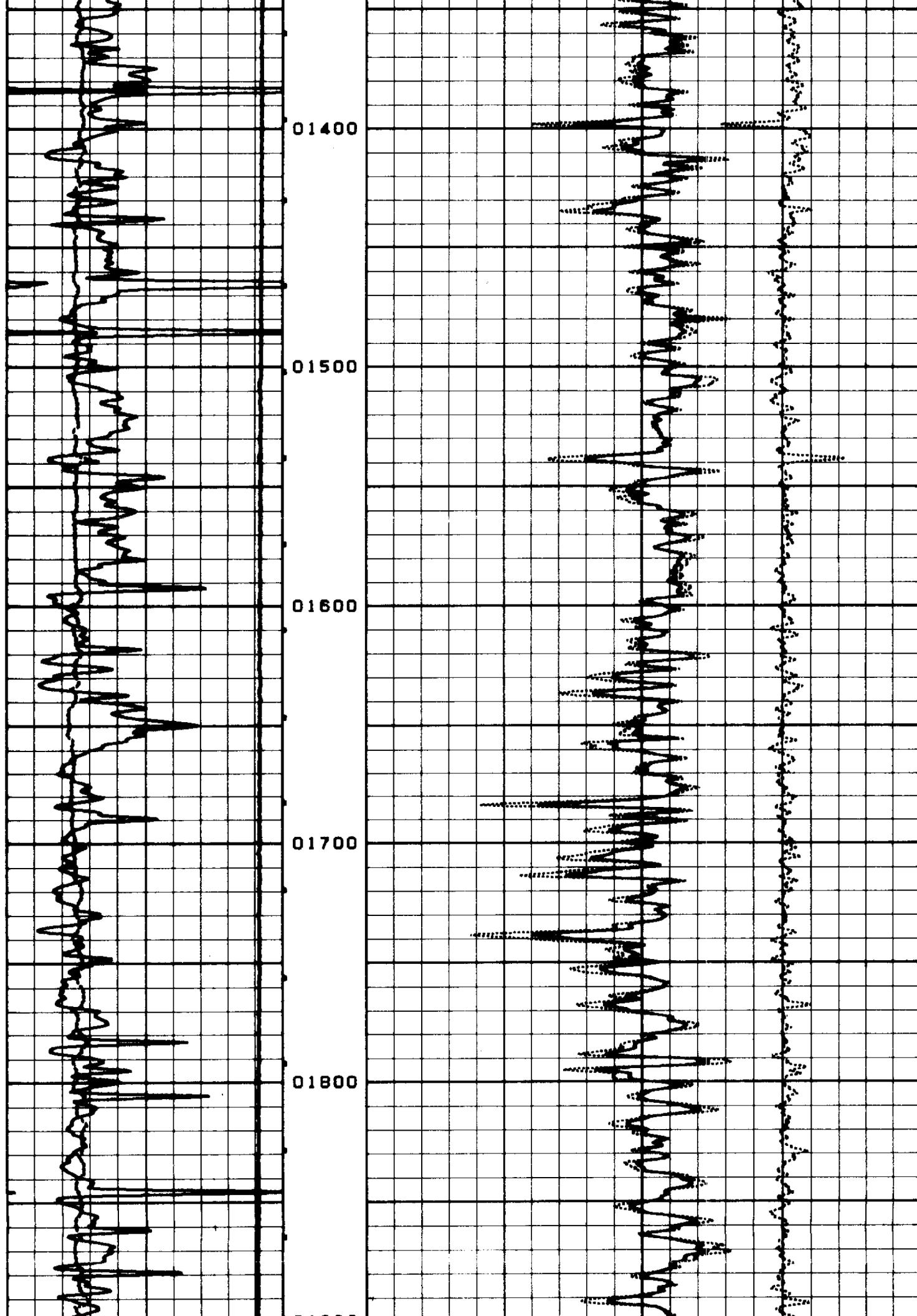
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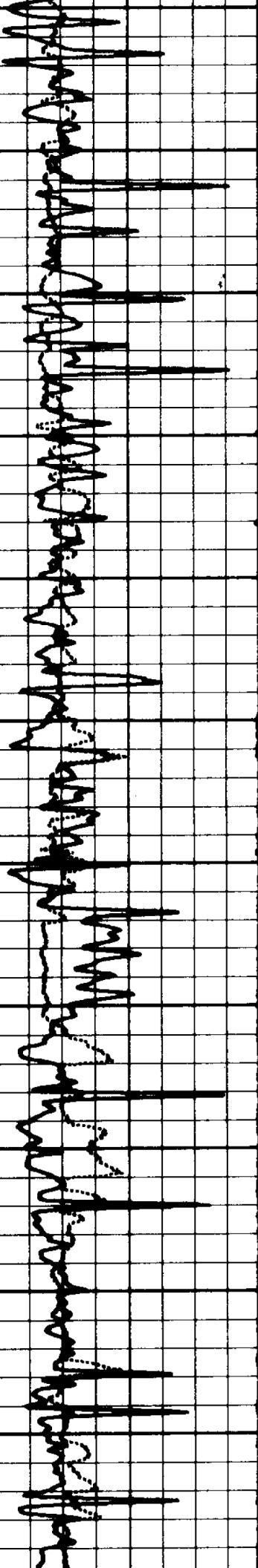
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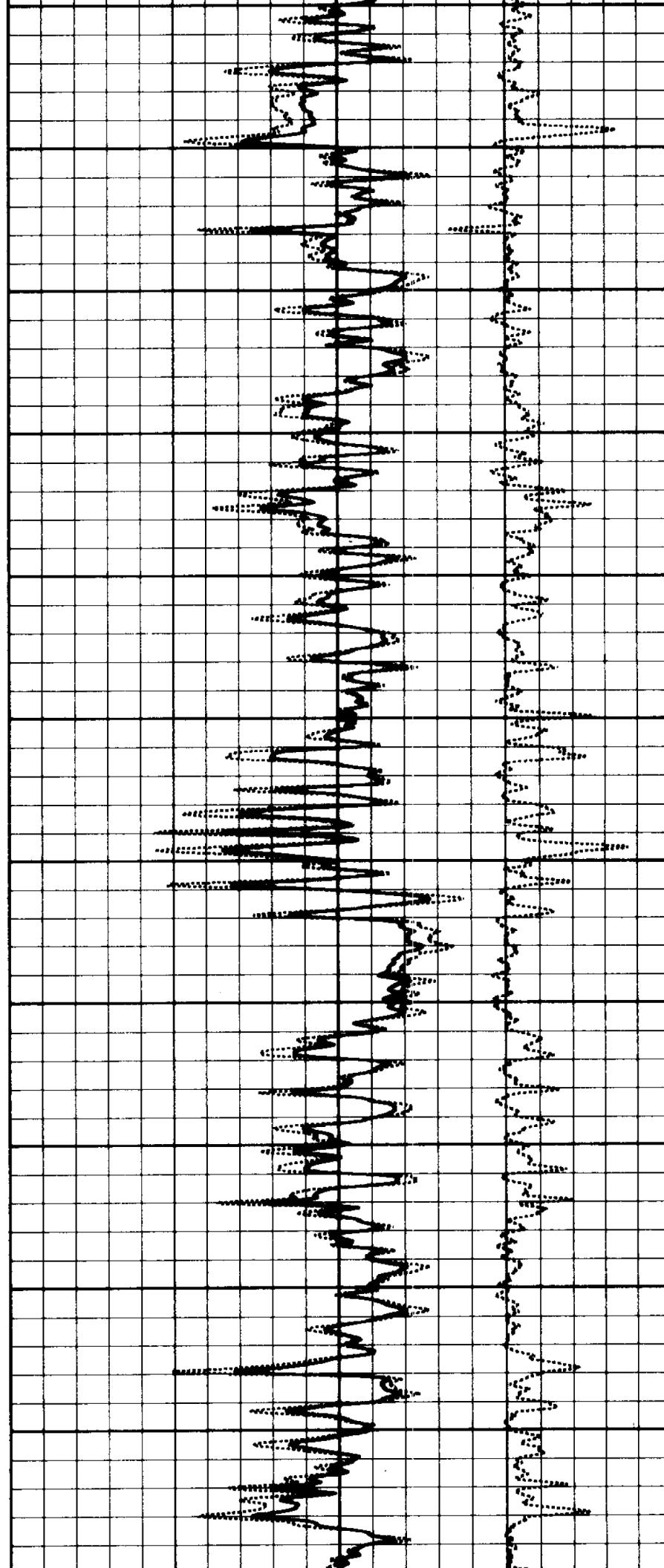




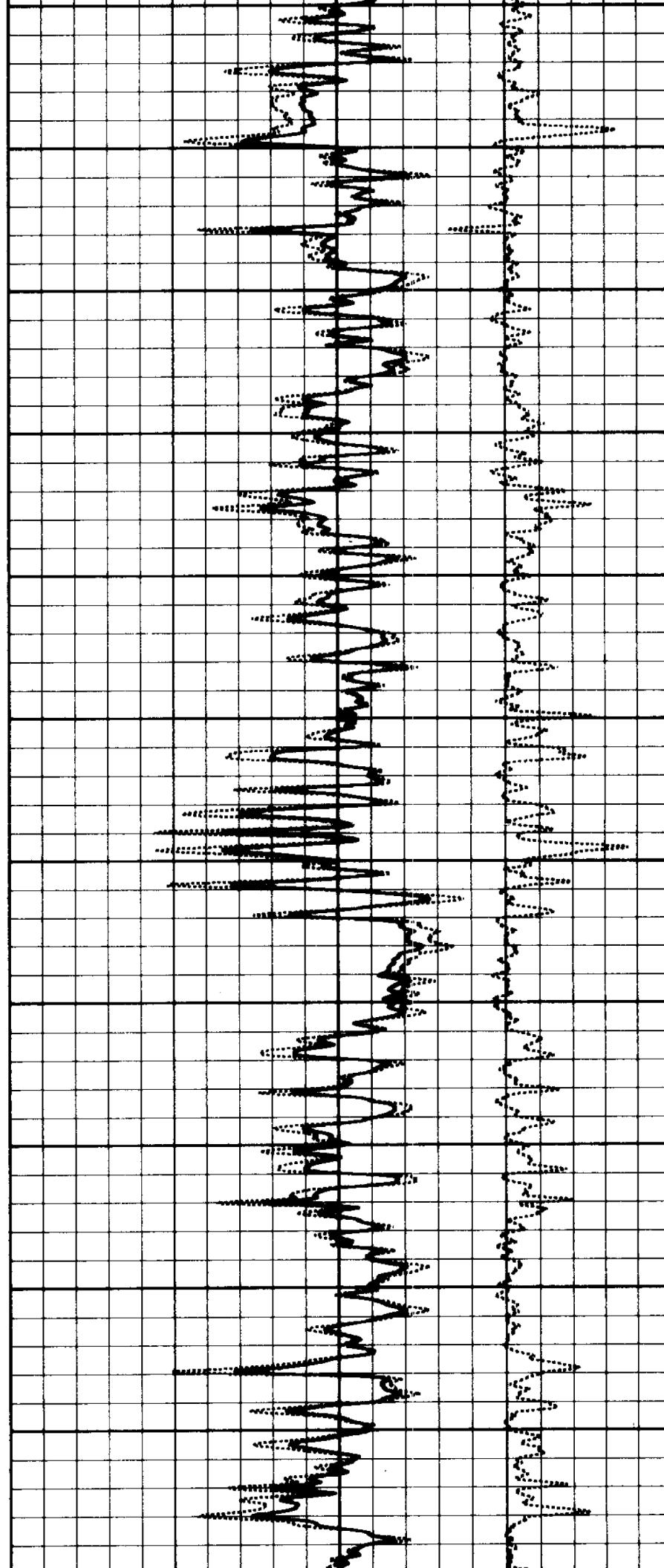
01900



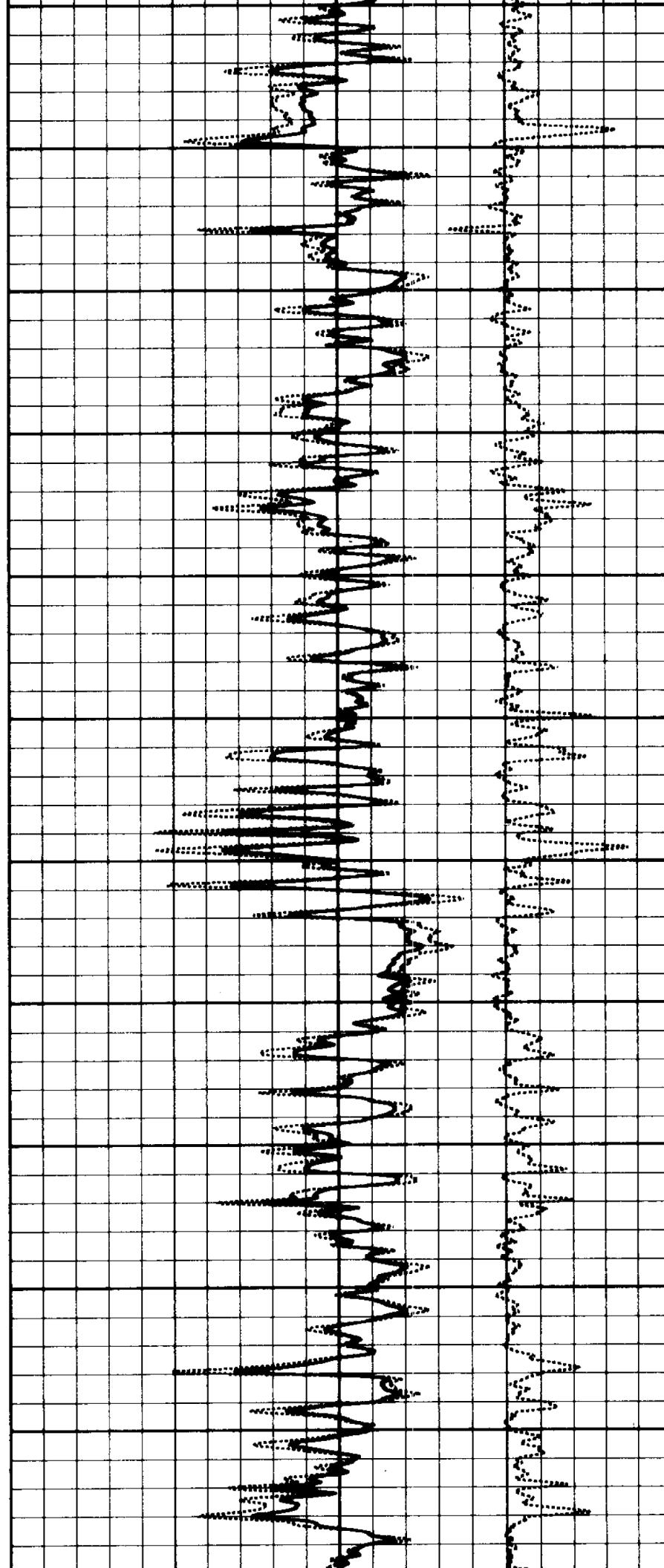
02000



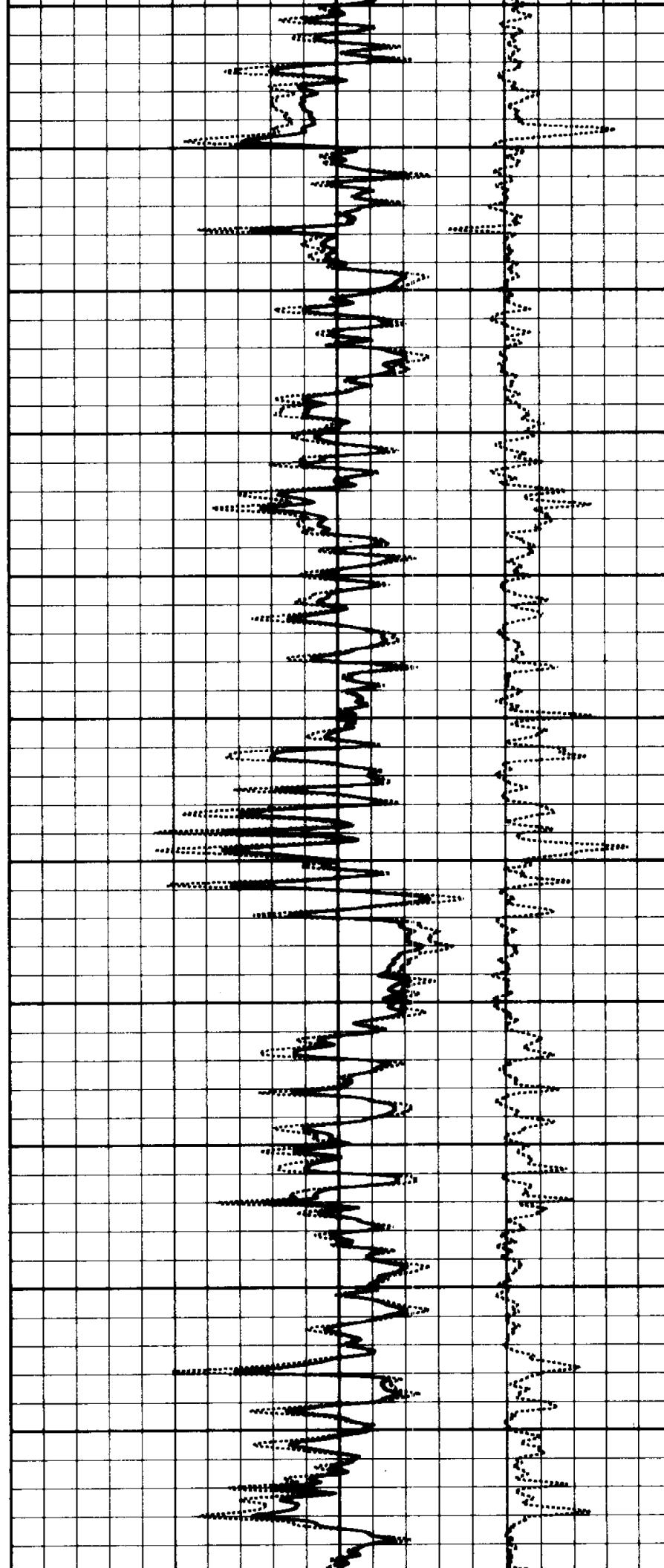
02100



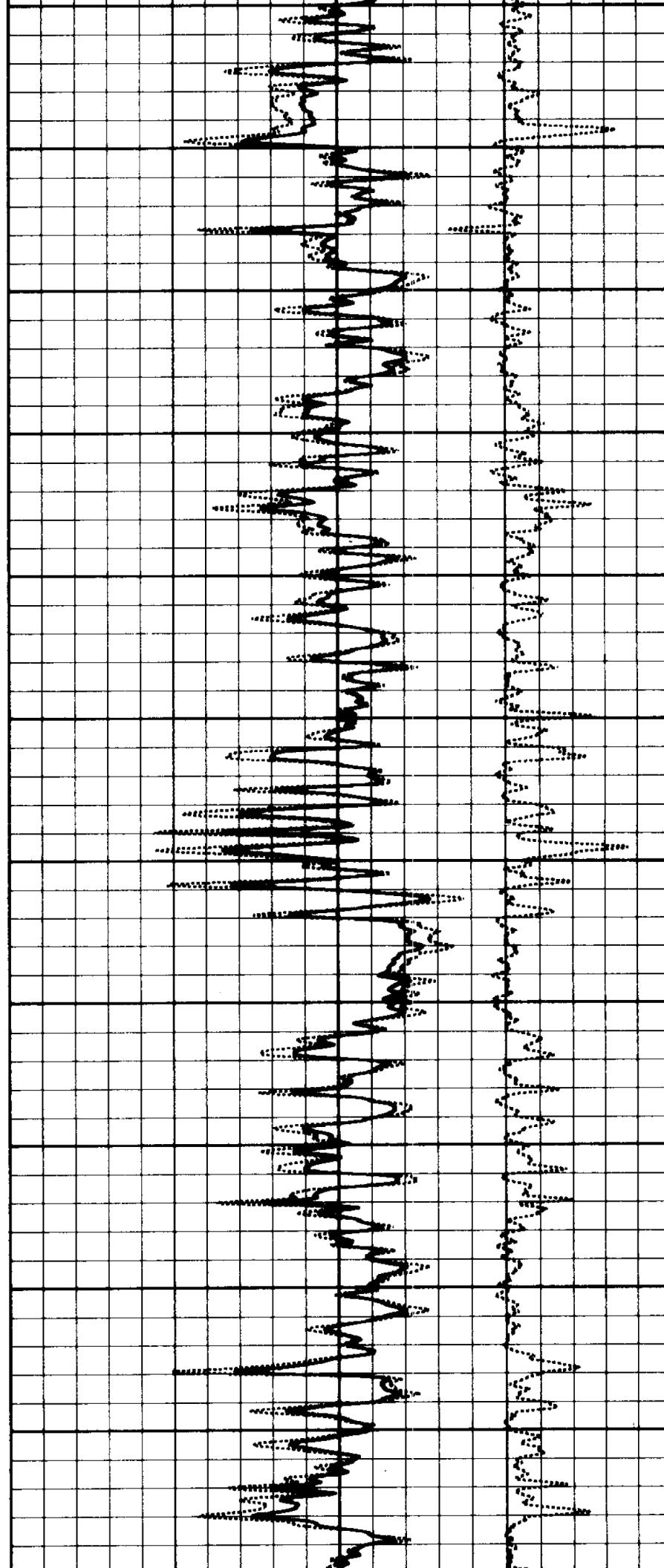
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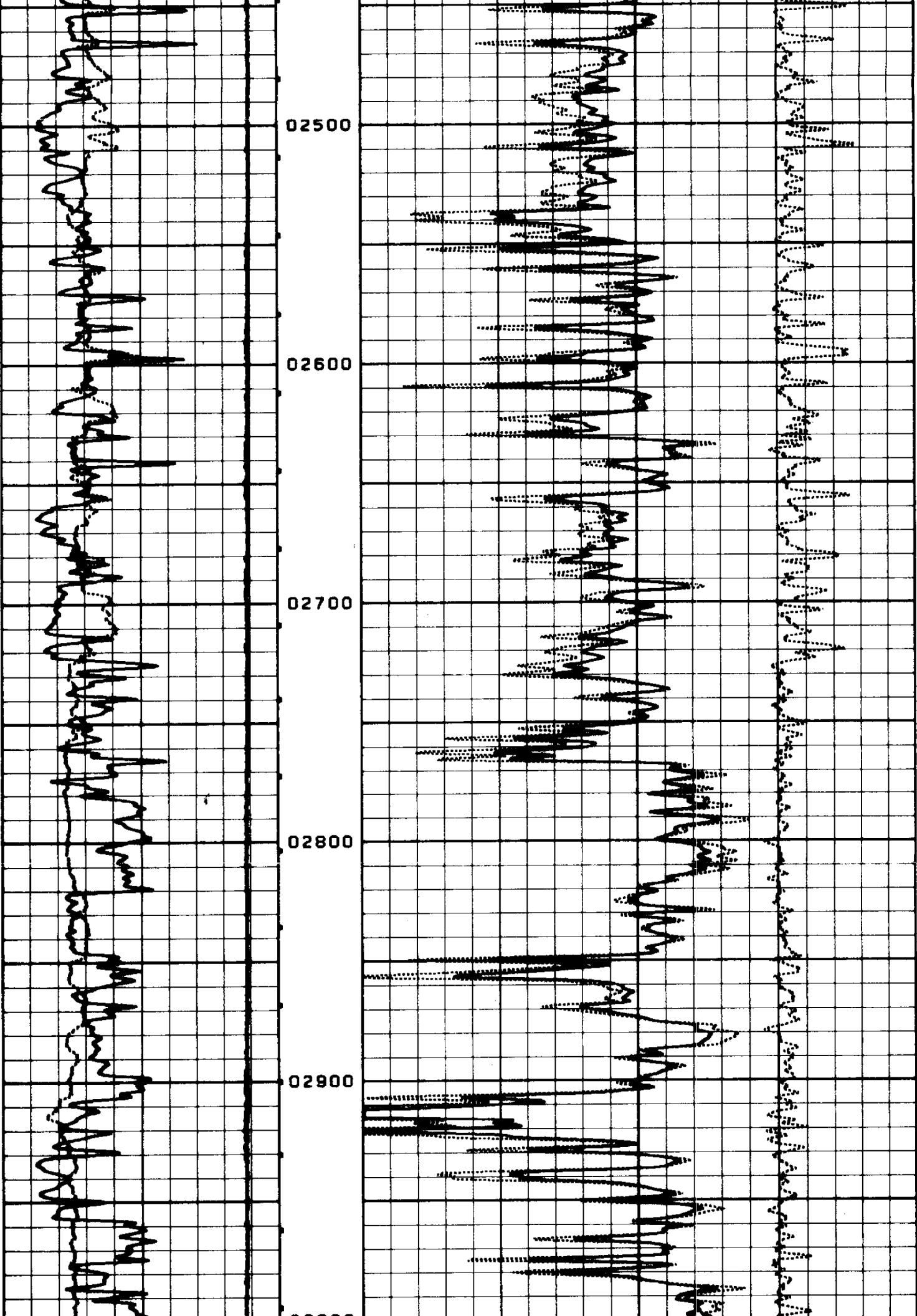


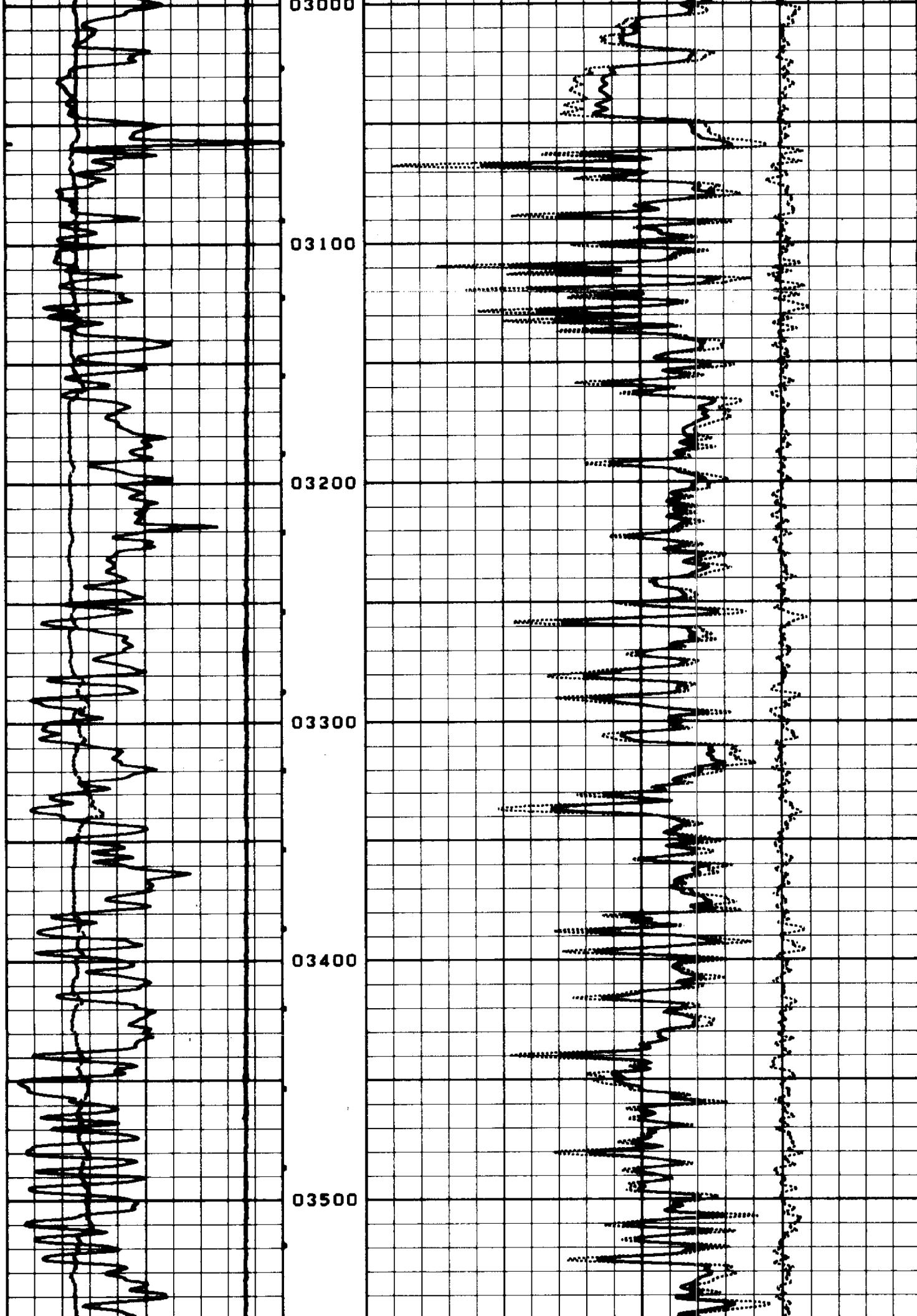
02300

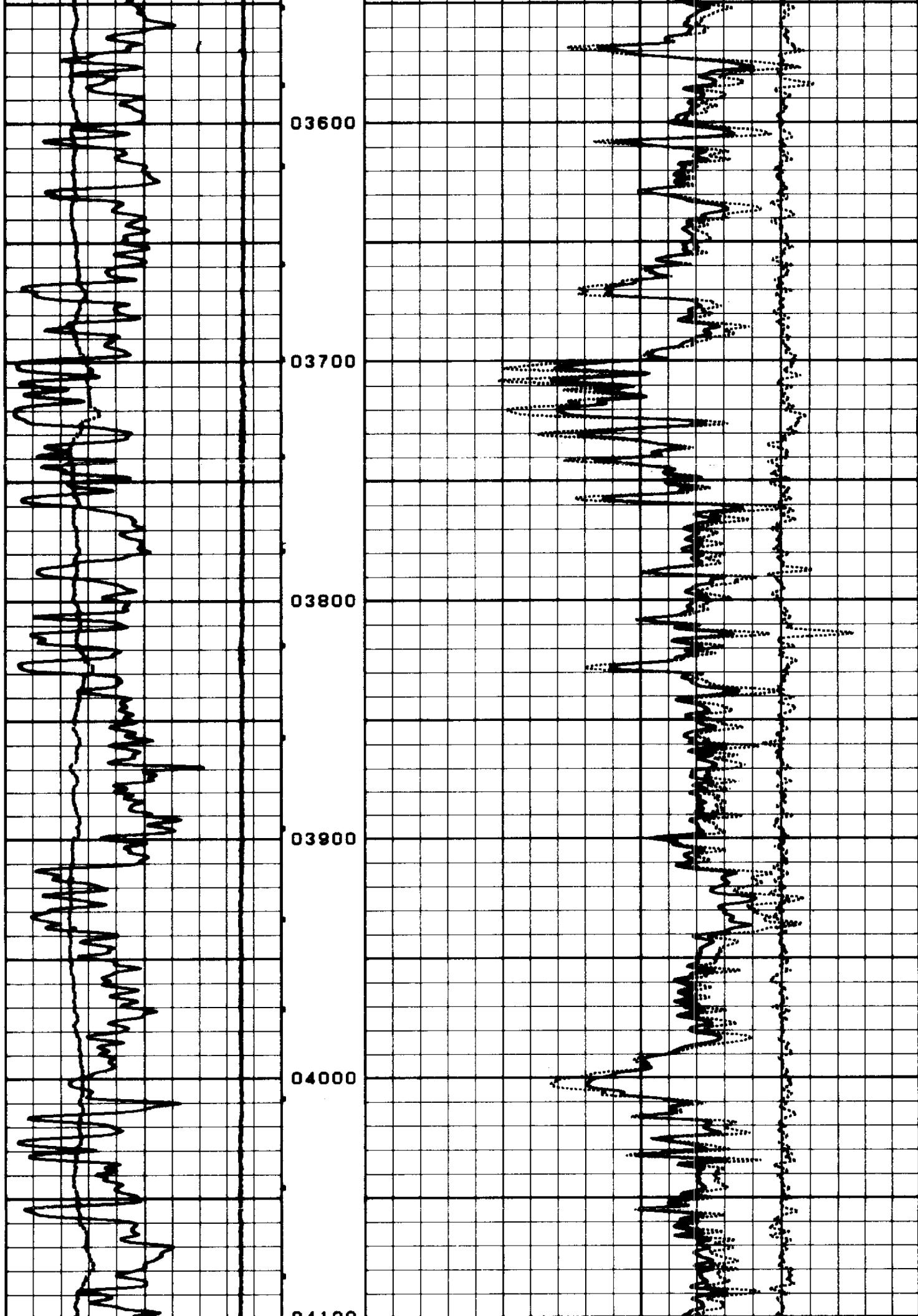


02400

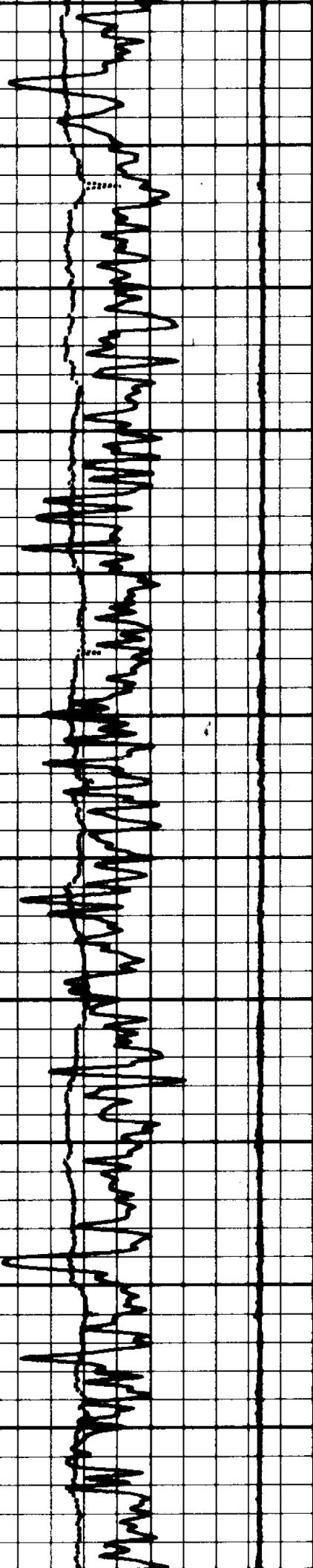








04100



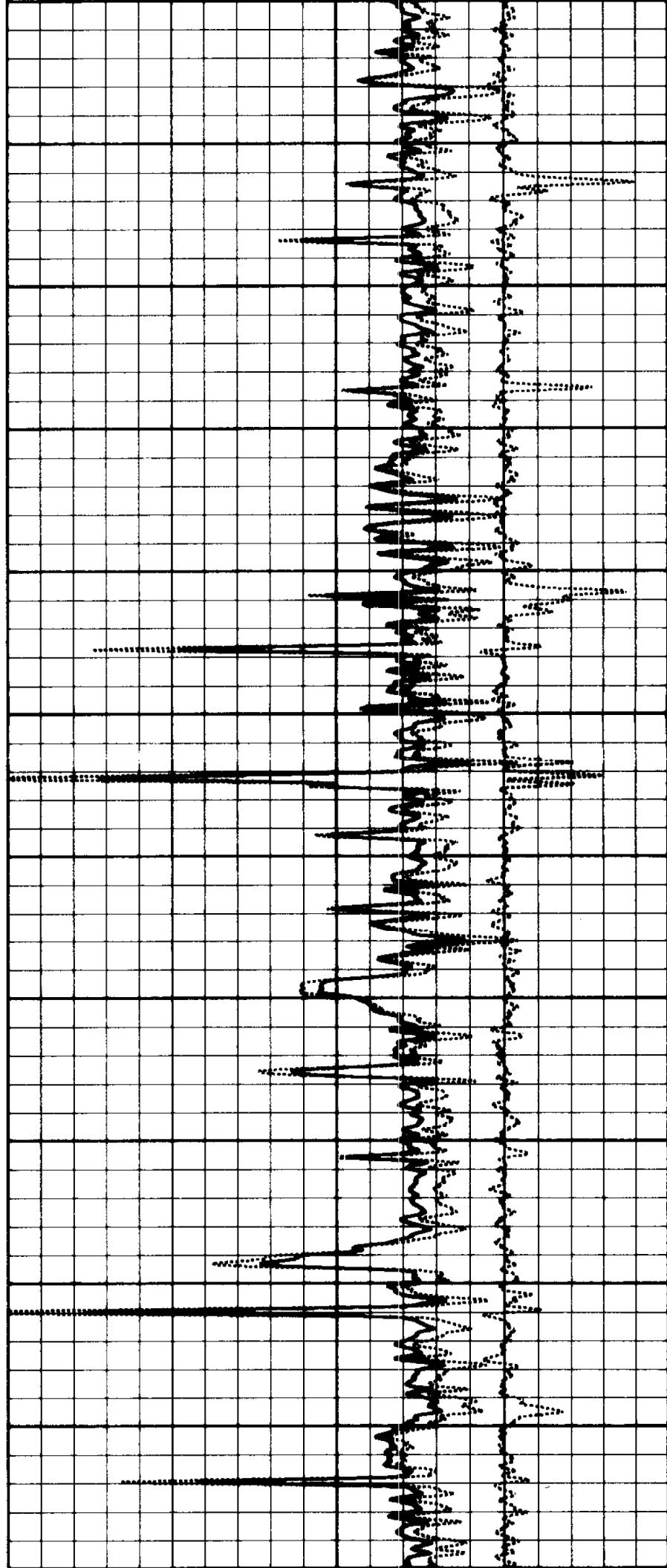
04200

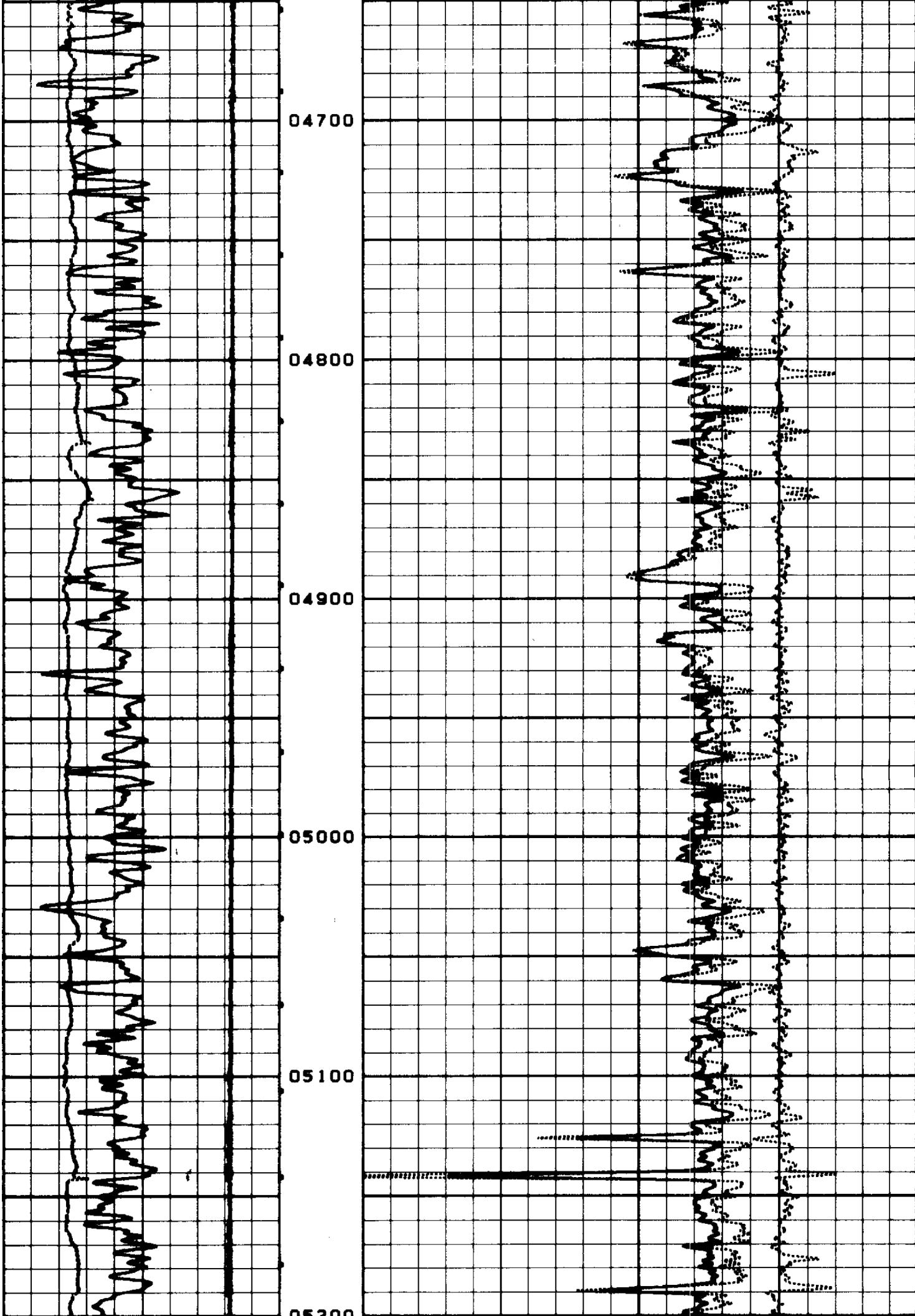
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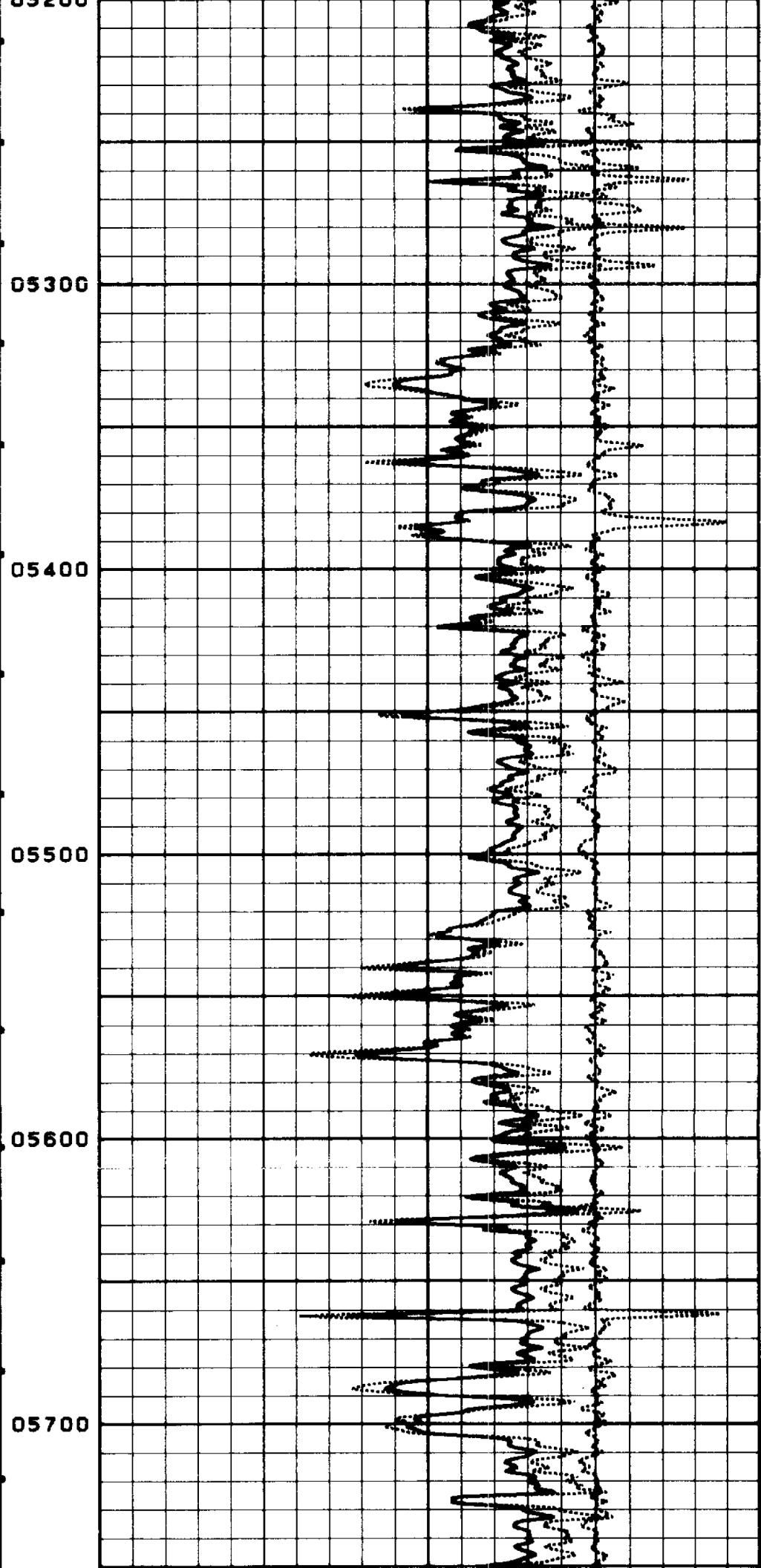
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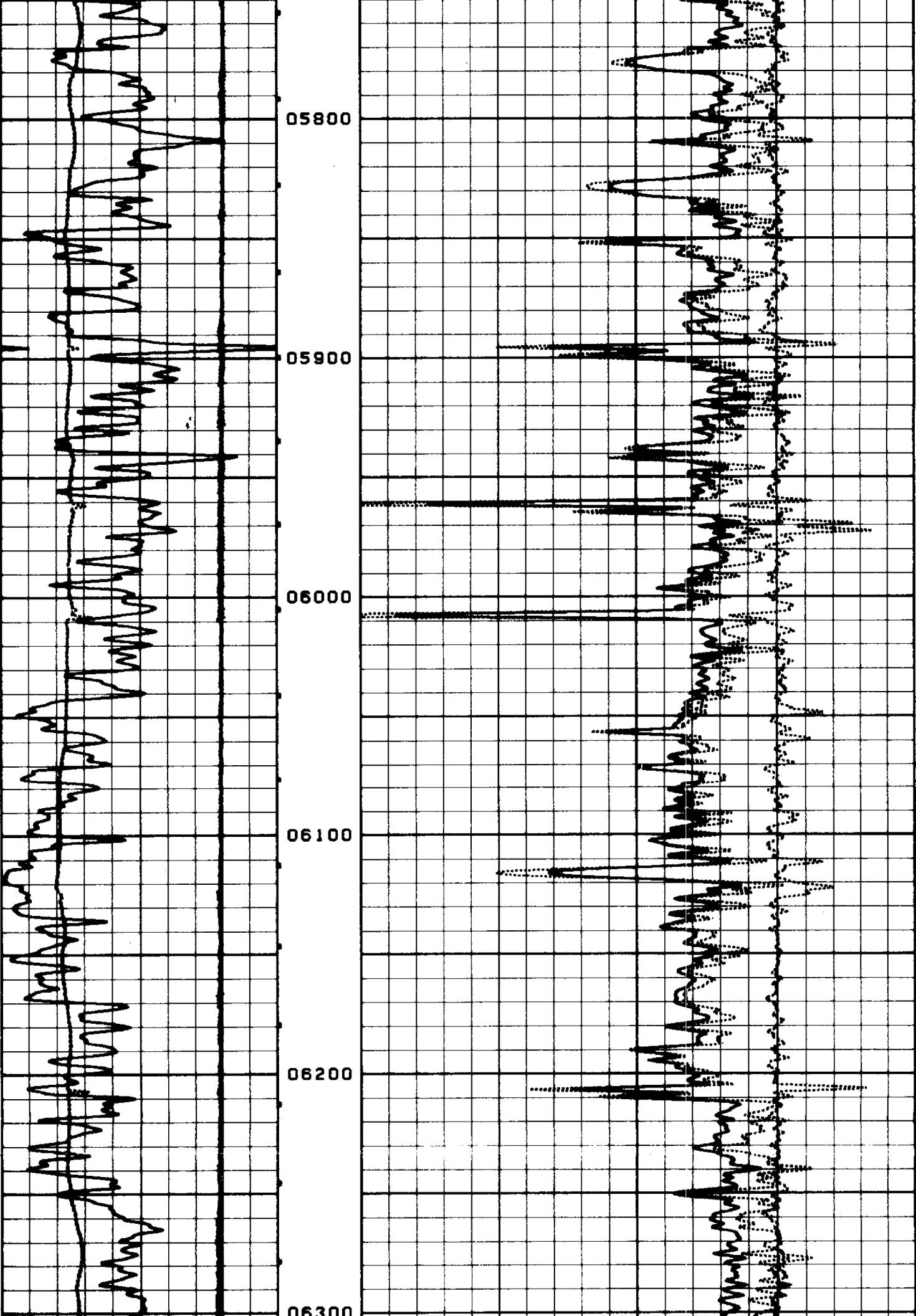
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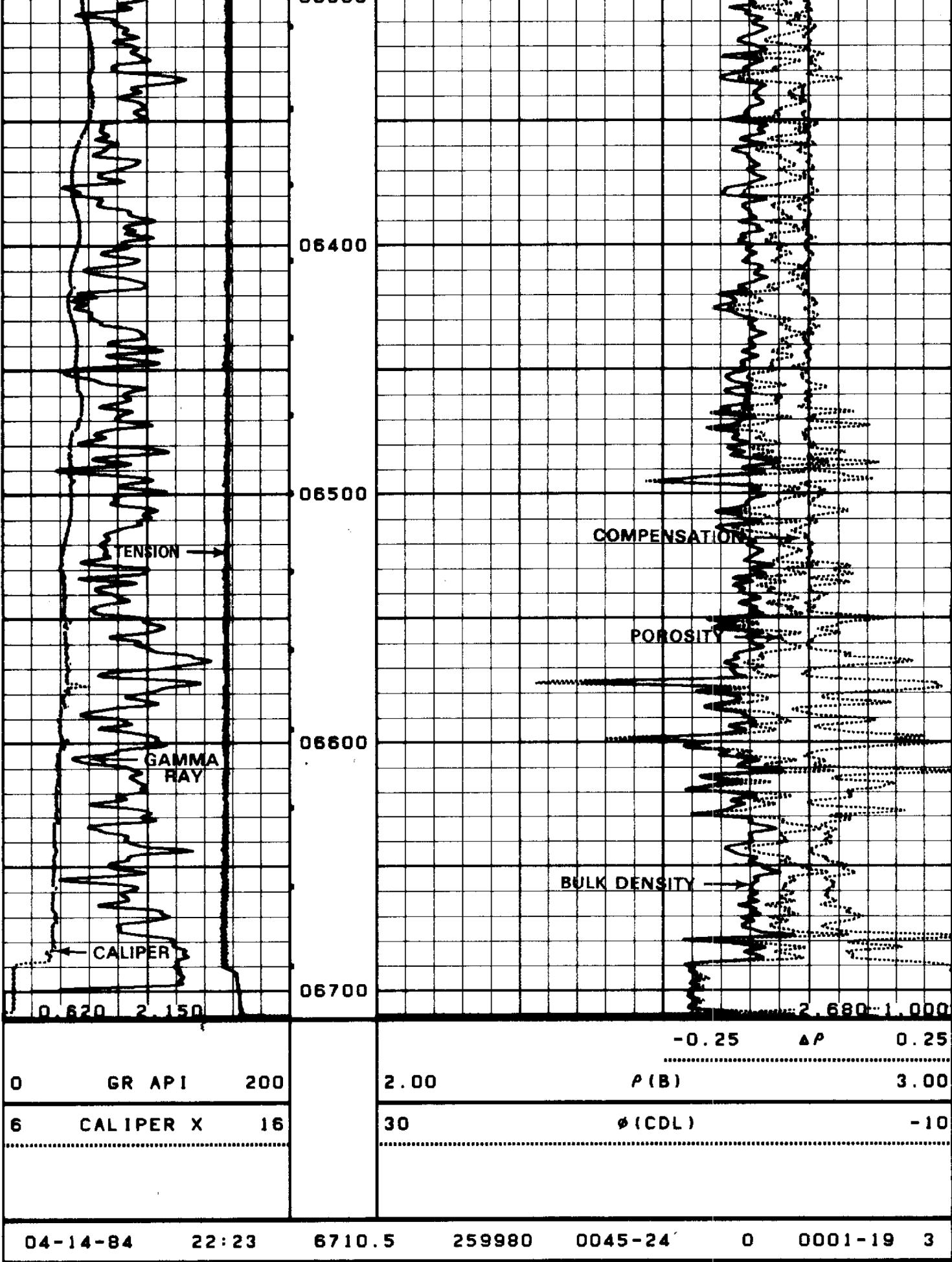
04600











04-14-84

01:24

354.0

259980

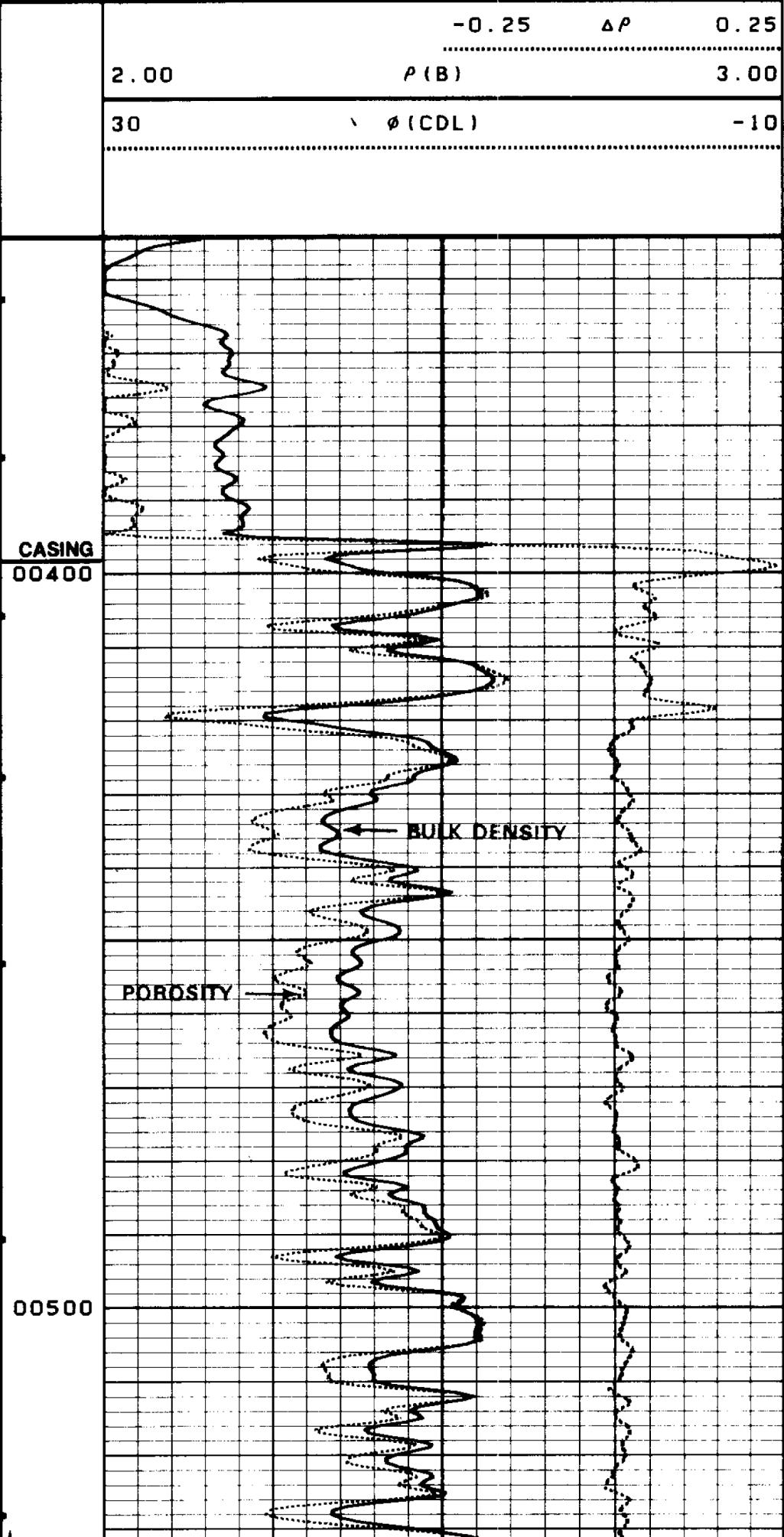
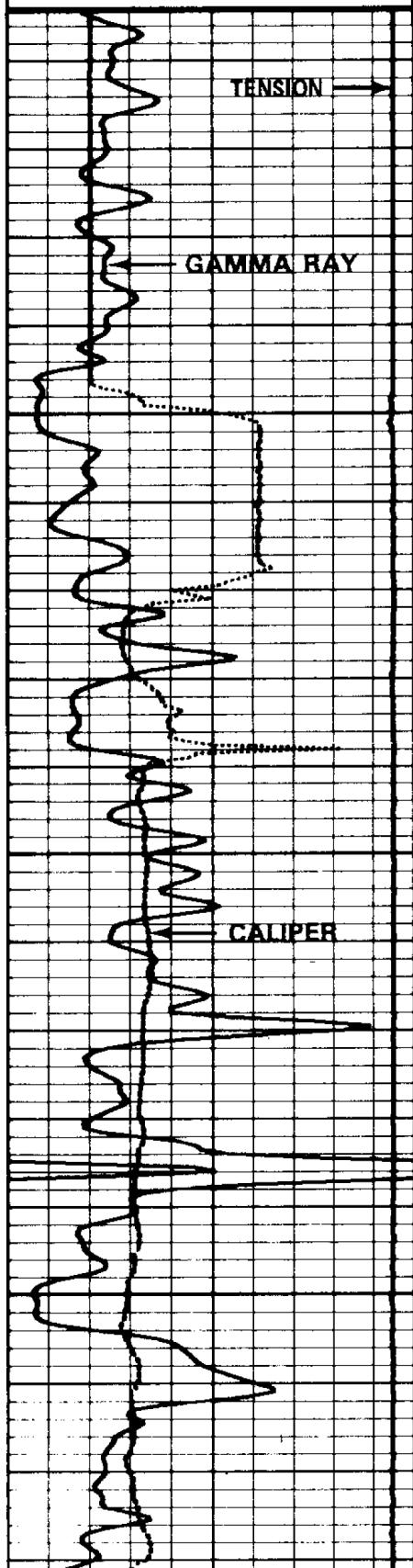
0045-24

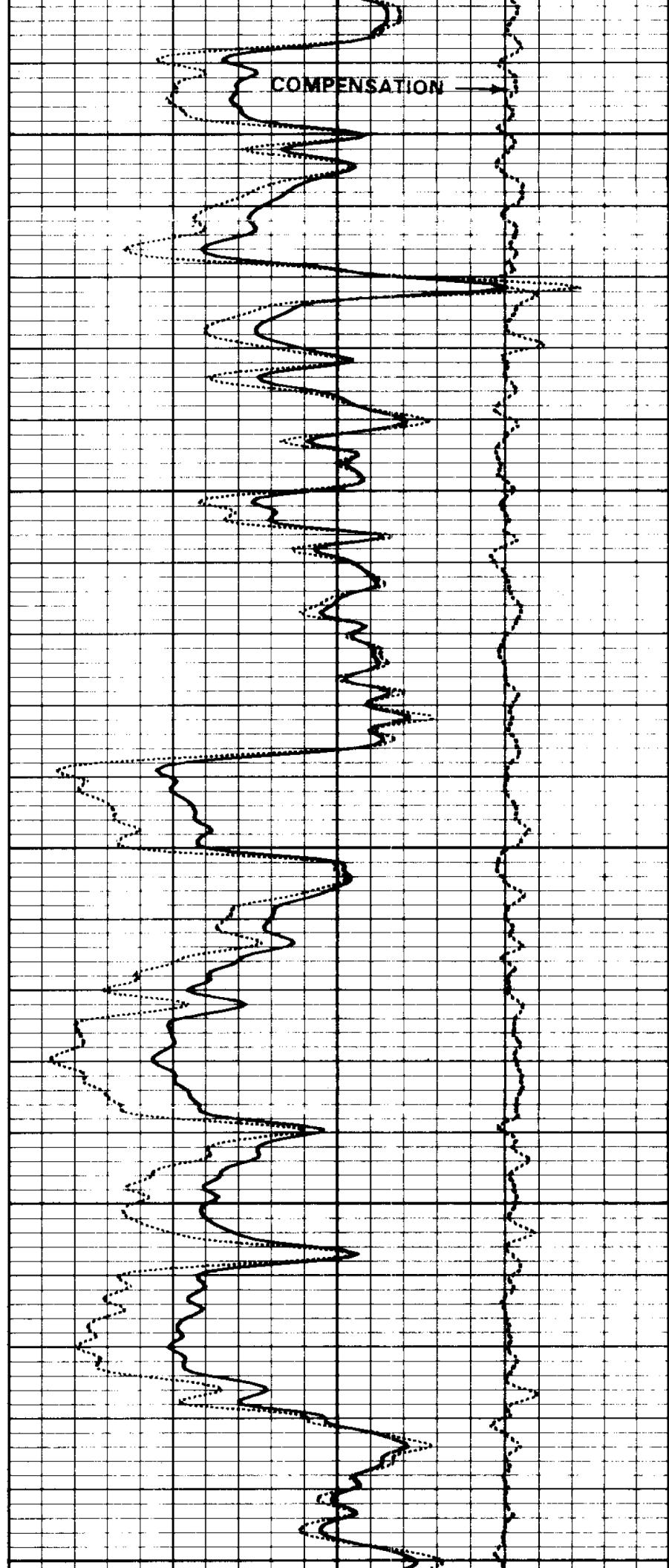
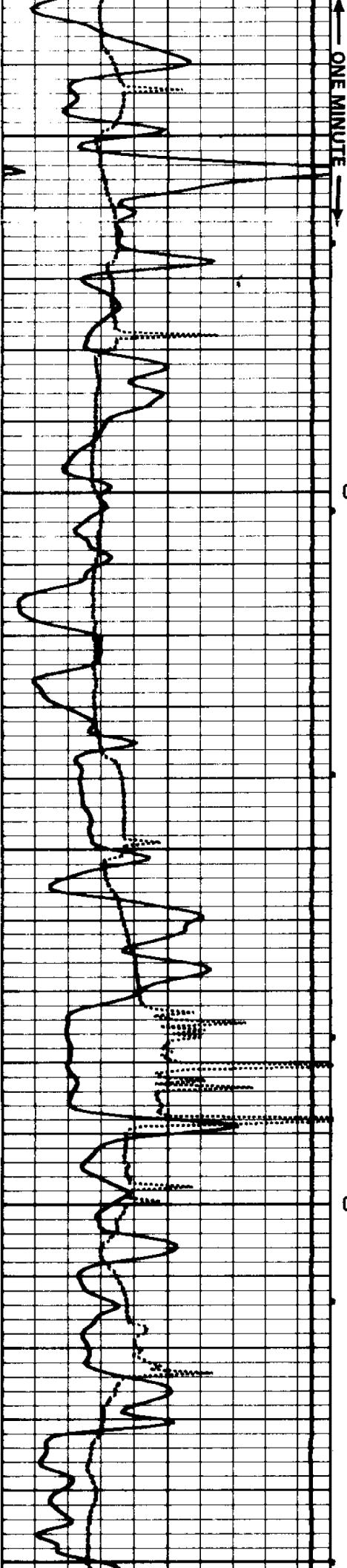
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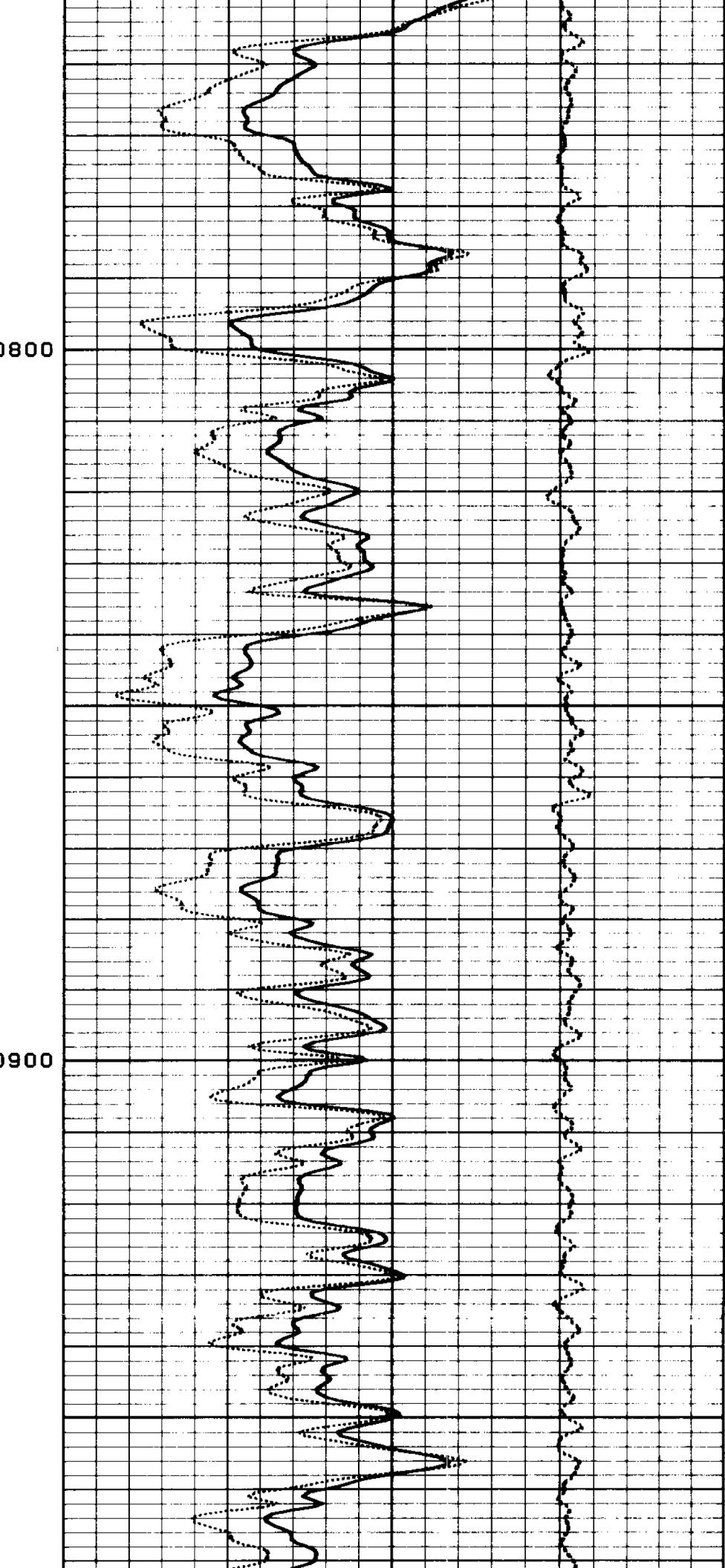
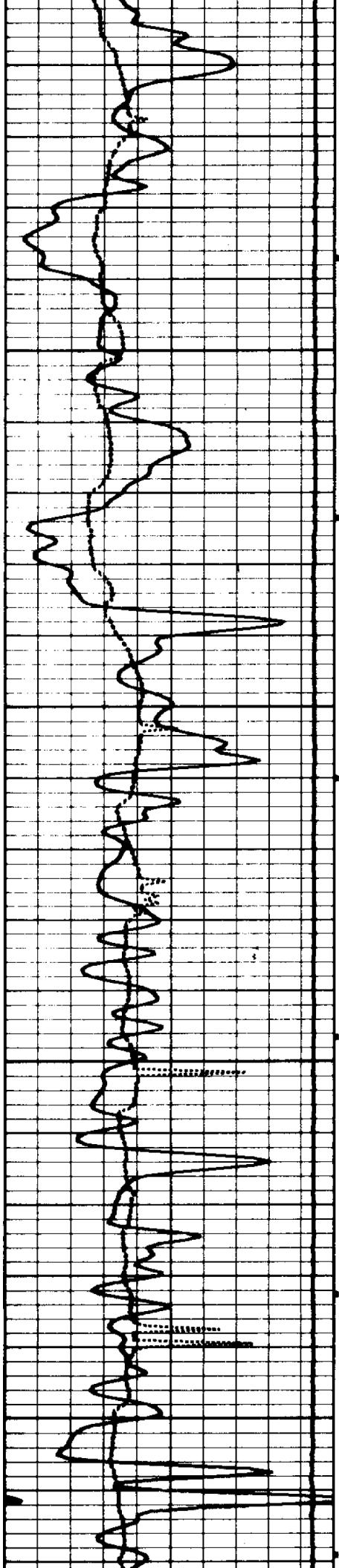
0001-19 3

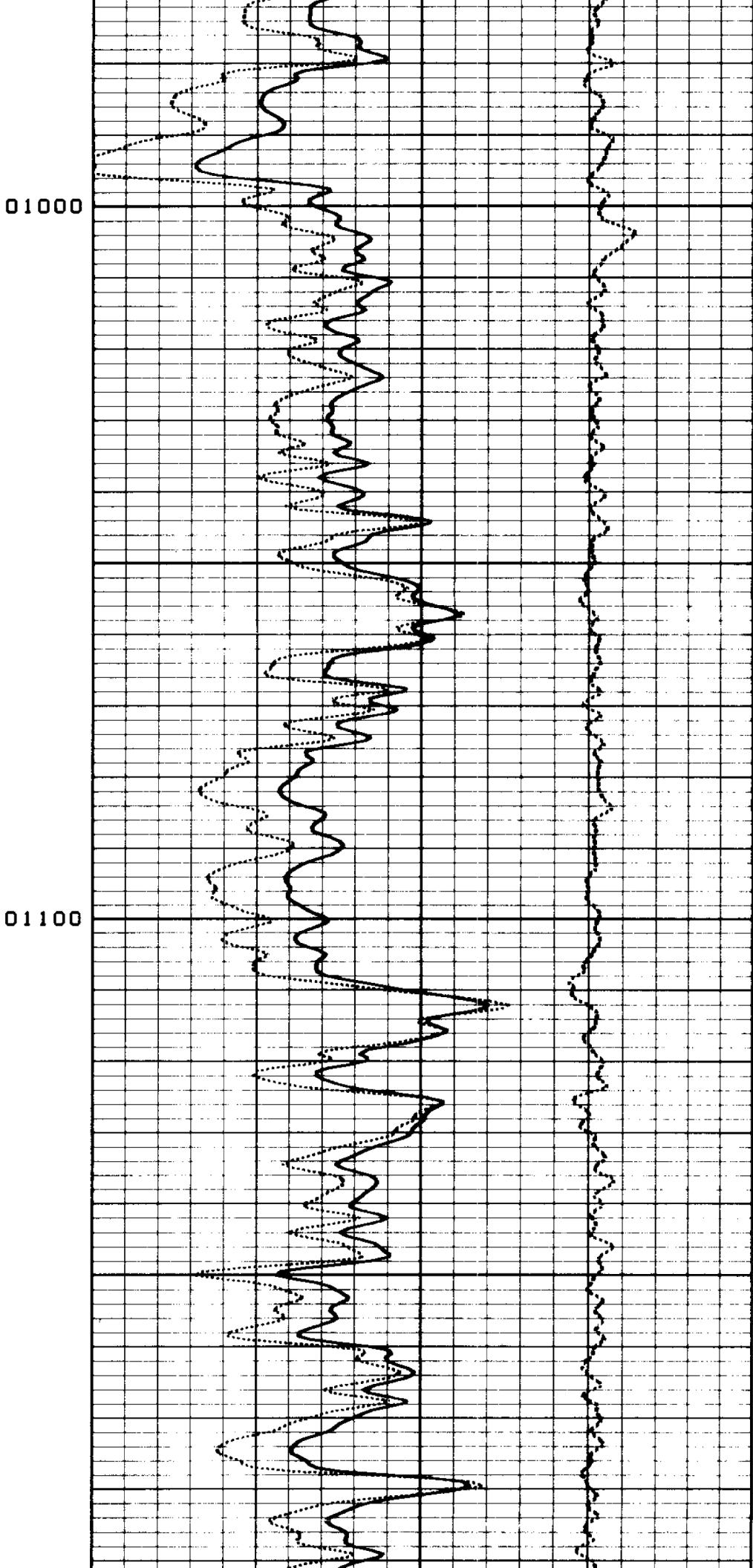
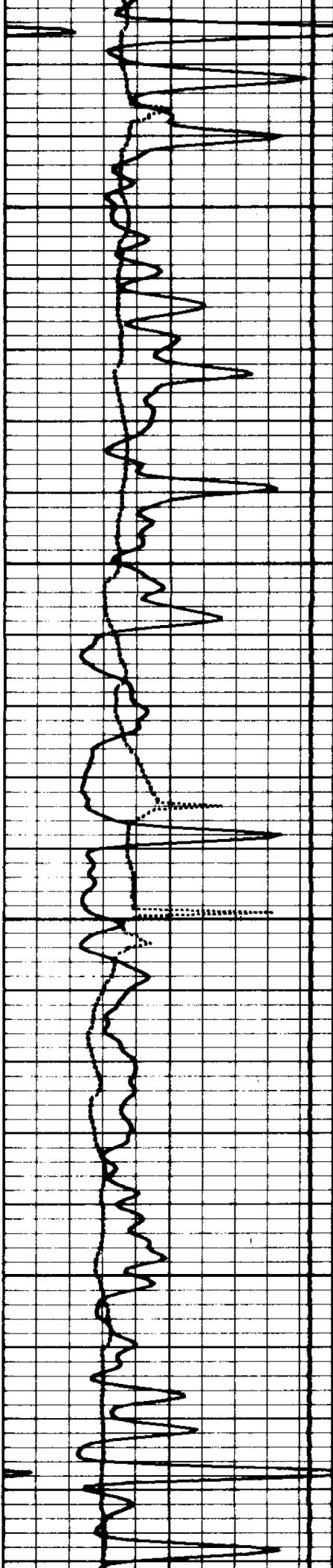
0	GR API	200
6	CALIPER X	16

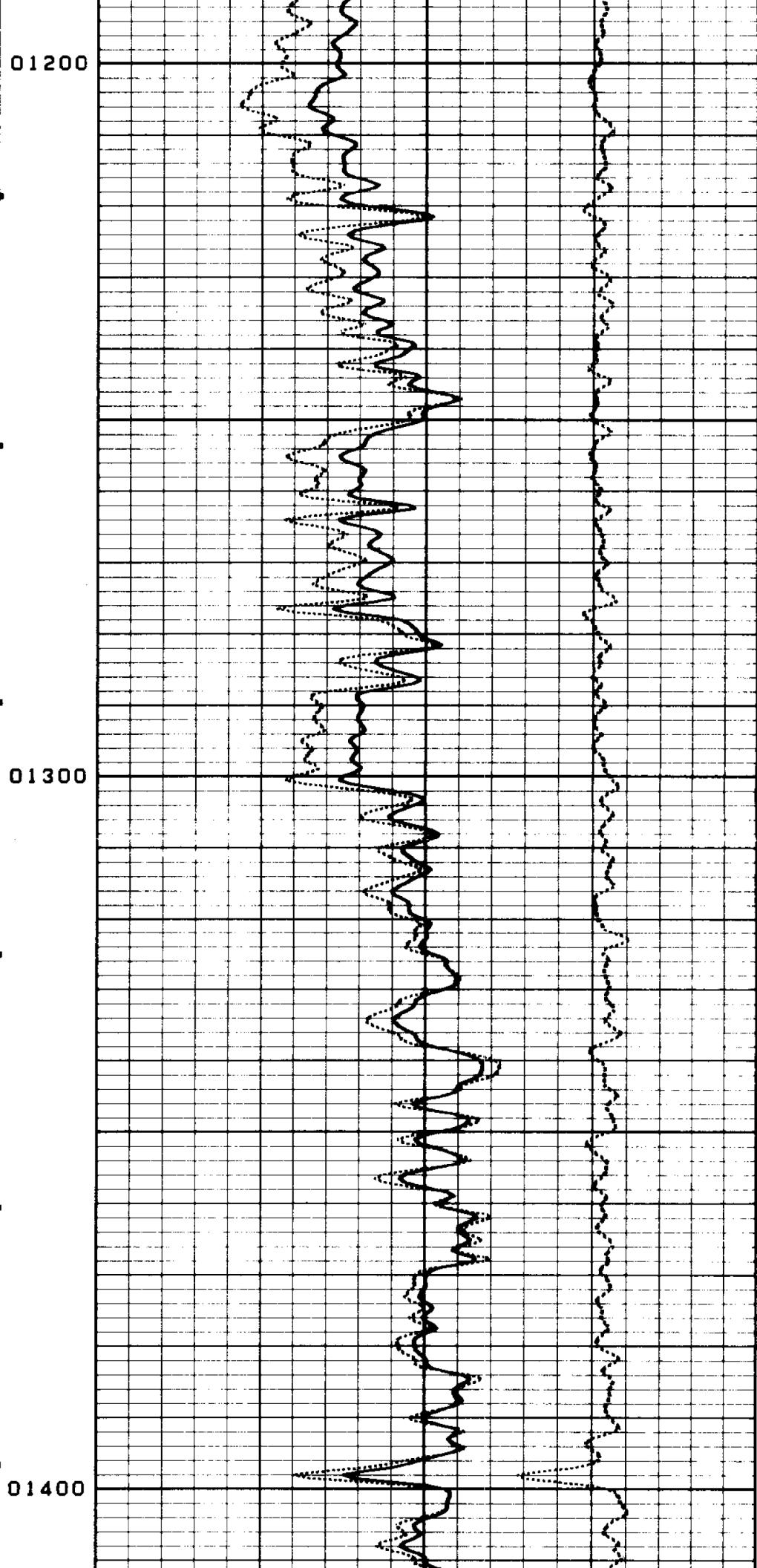
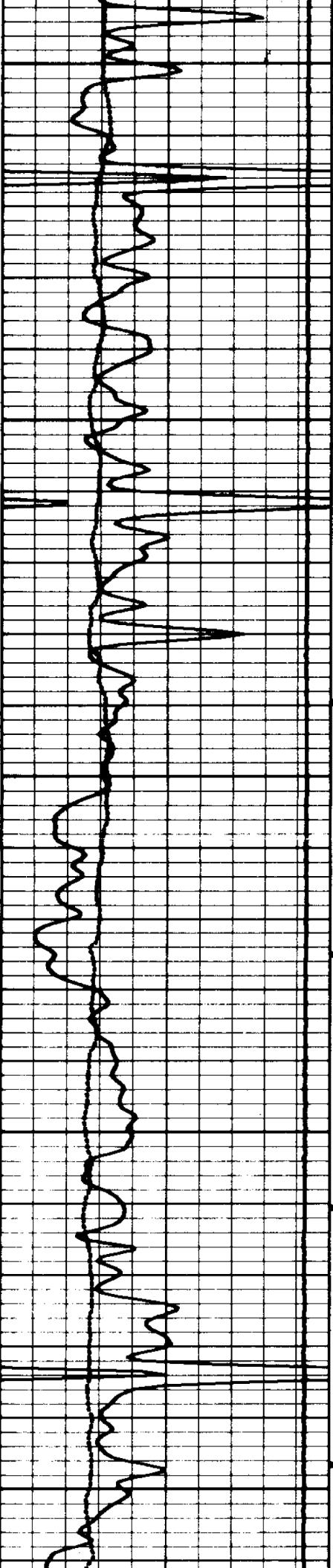
-0.25	ΔP	0.25
2.00	P (B)	3.00
30	ϕ (CDL)	-10

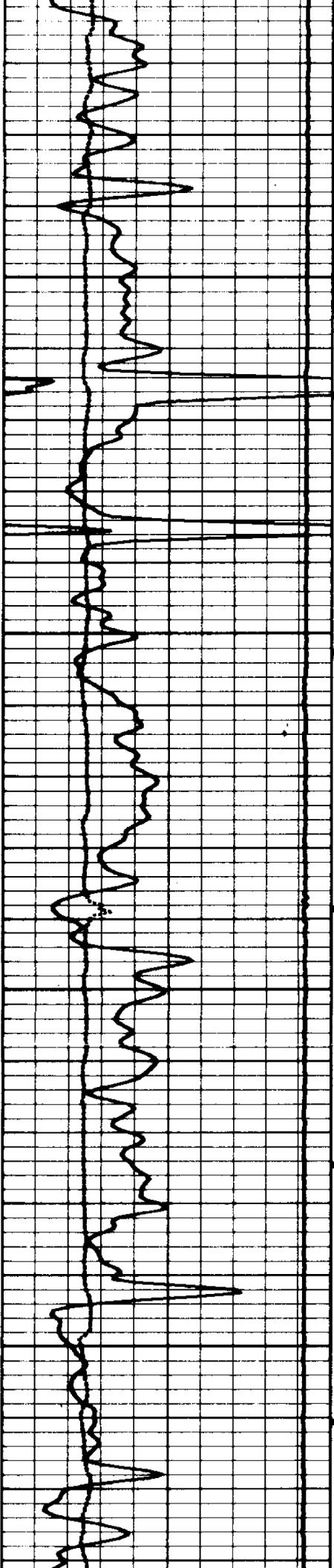






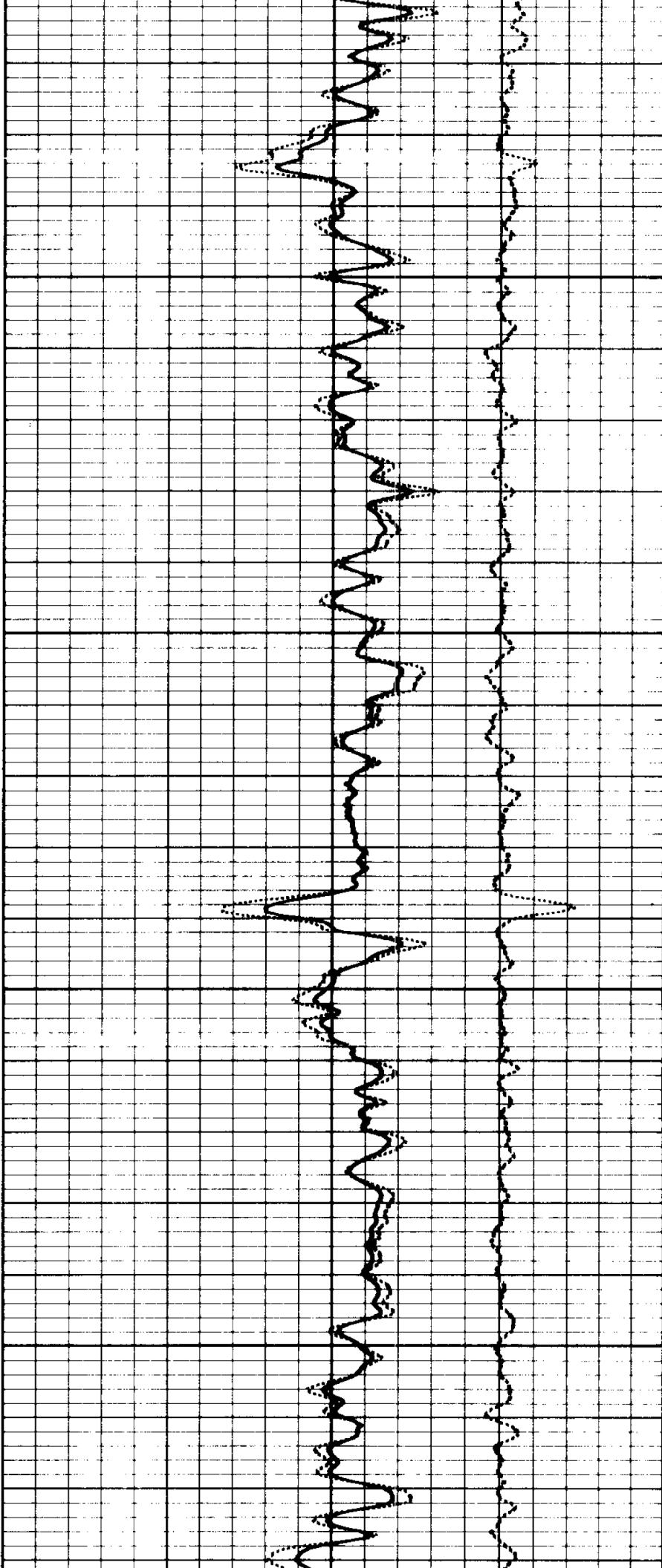


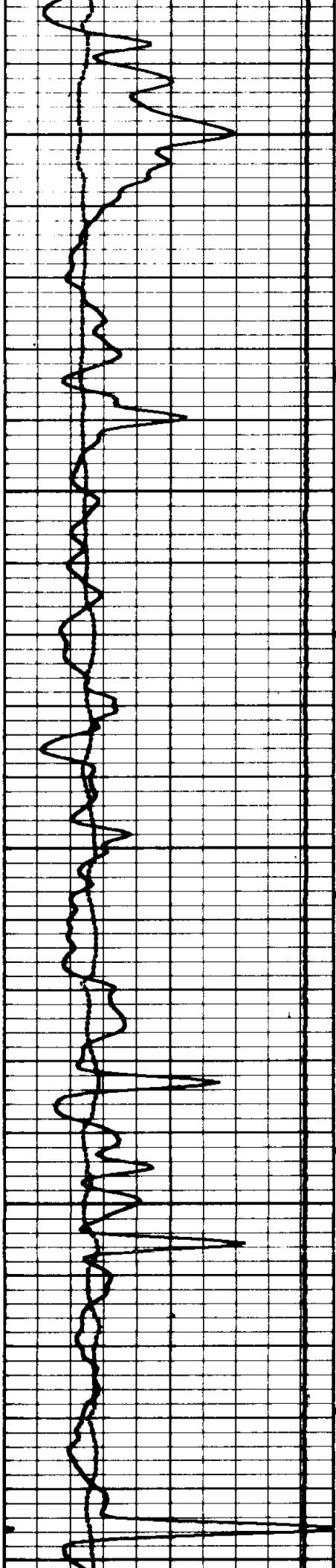




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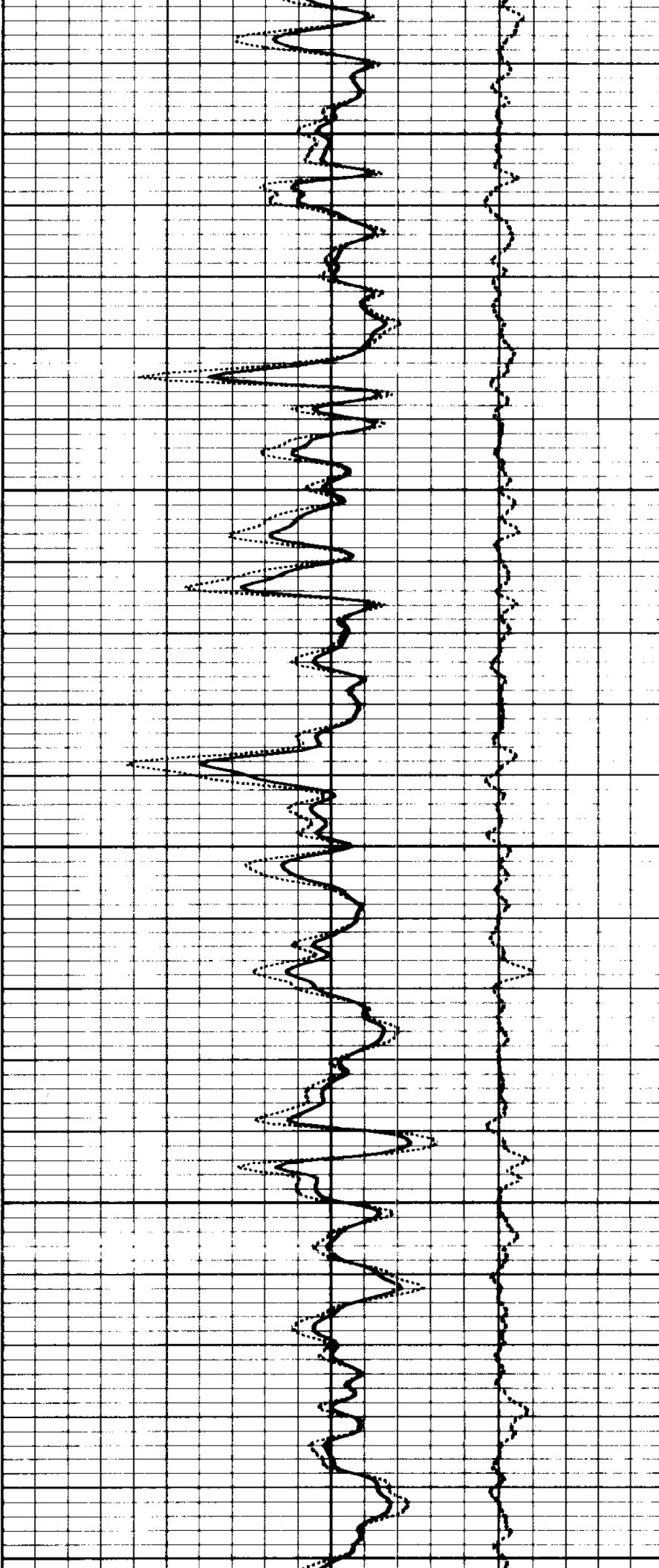
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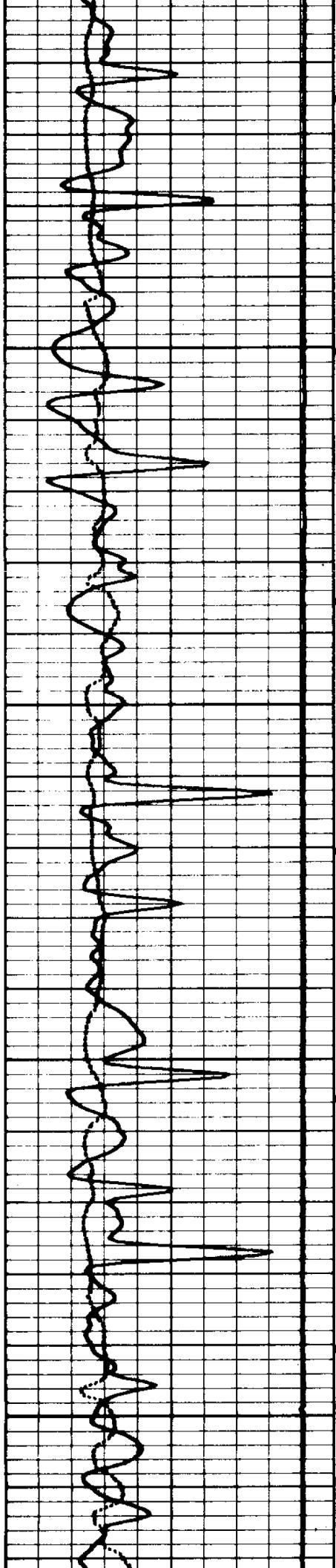




01700

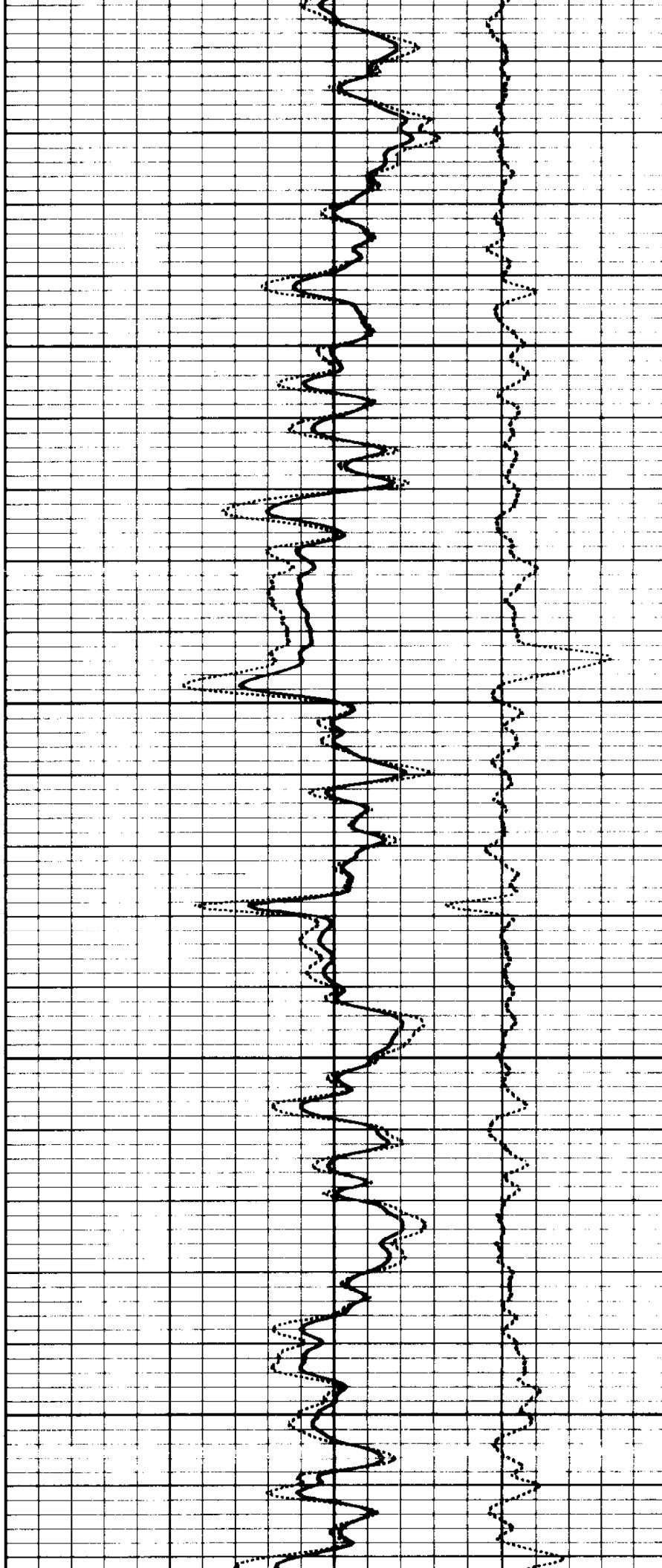
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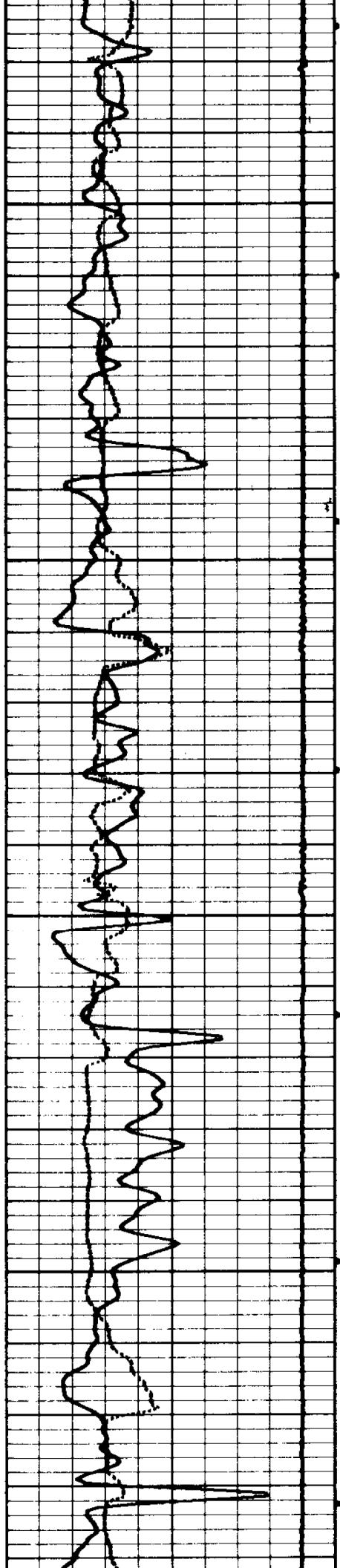




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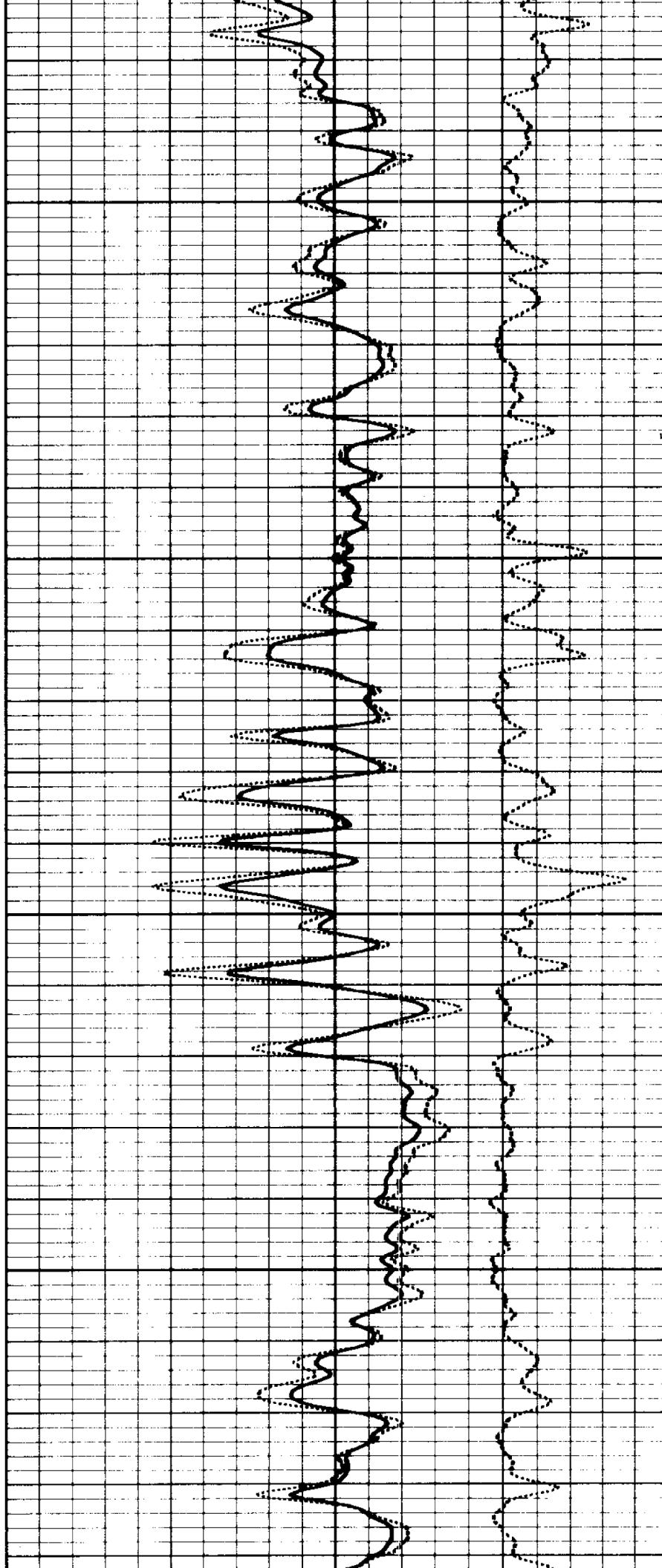
02000





02100

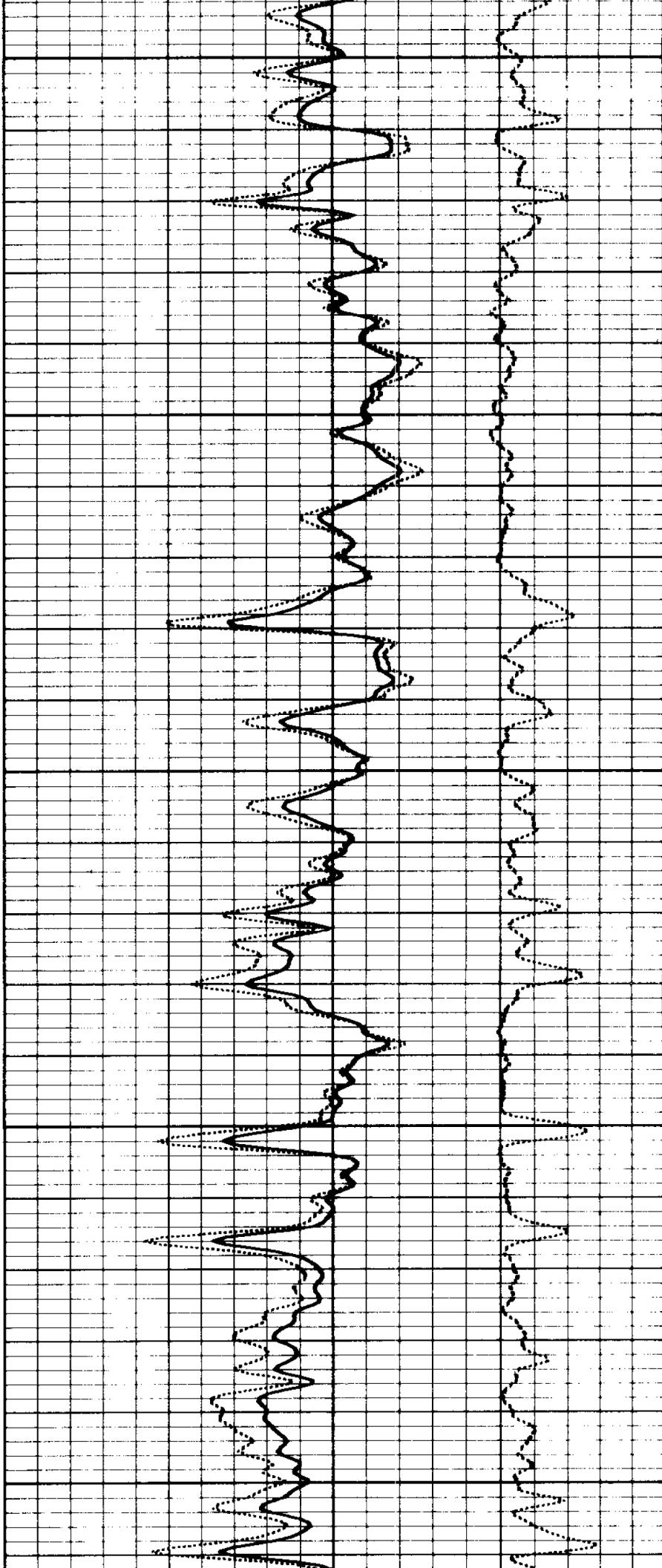
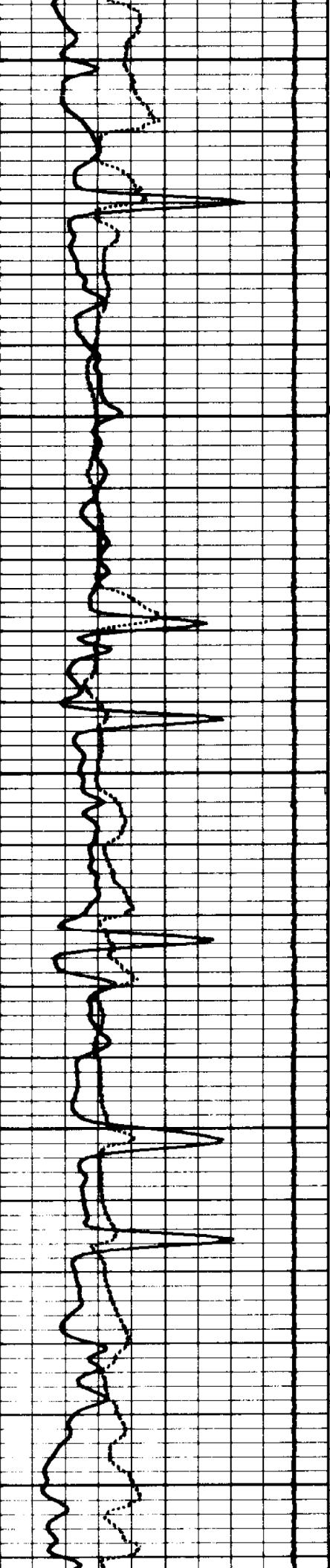
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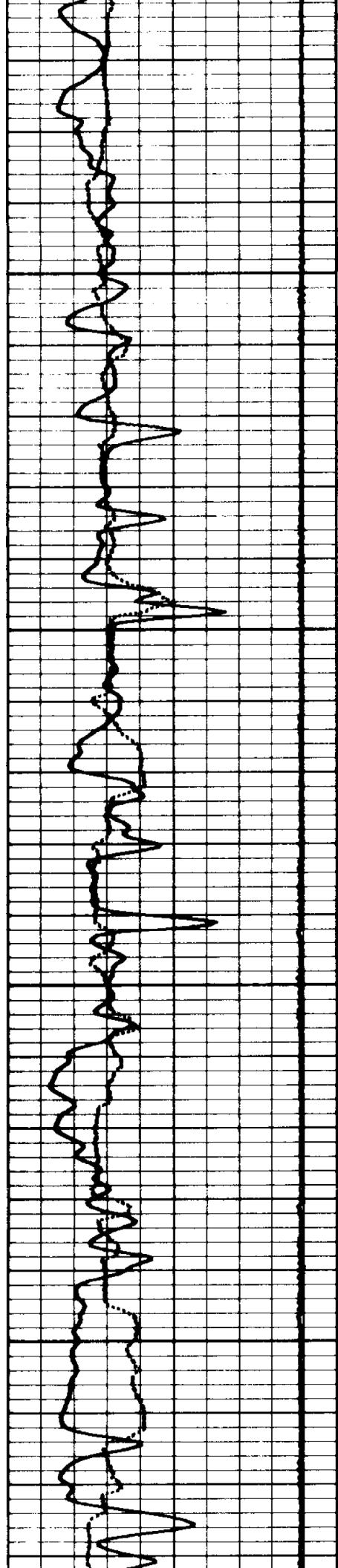


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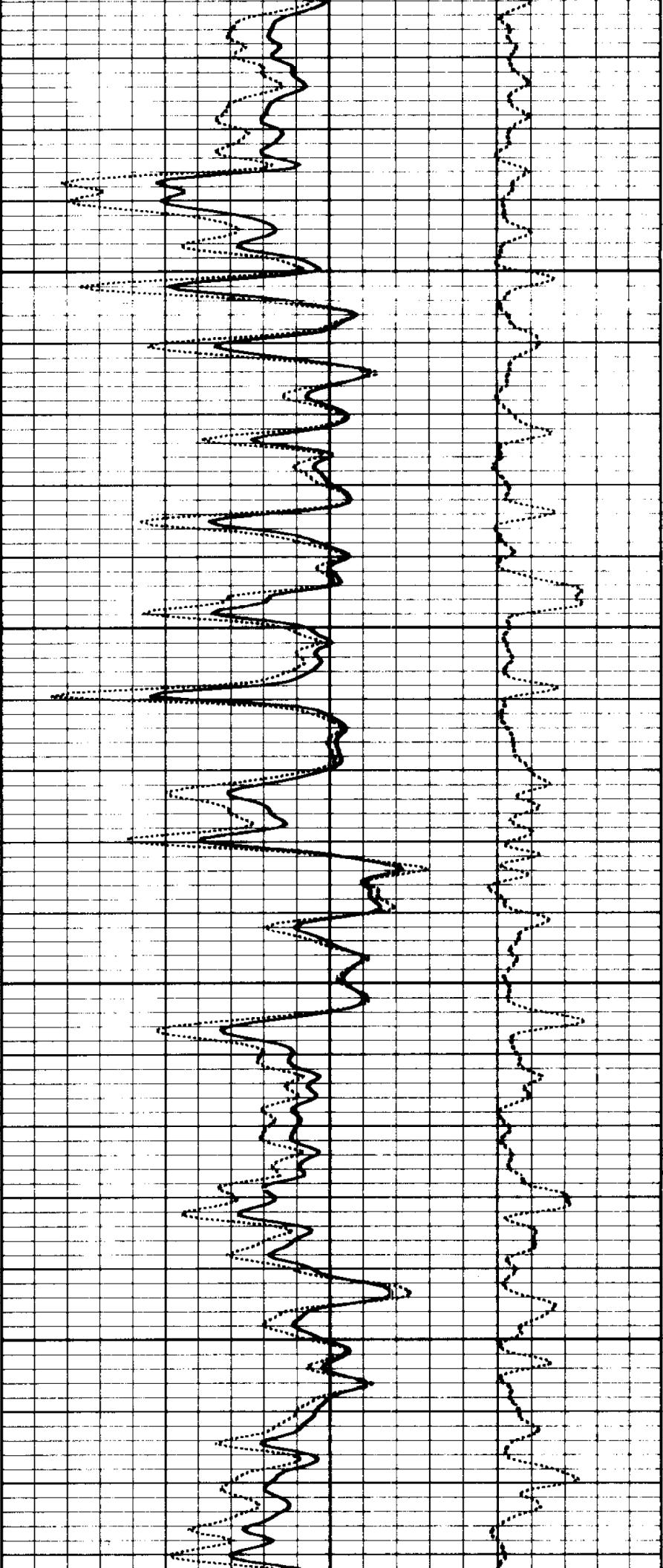
02400

02500

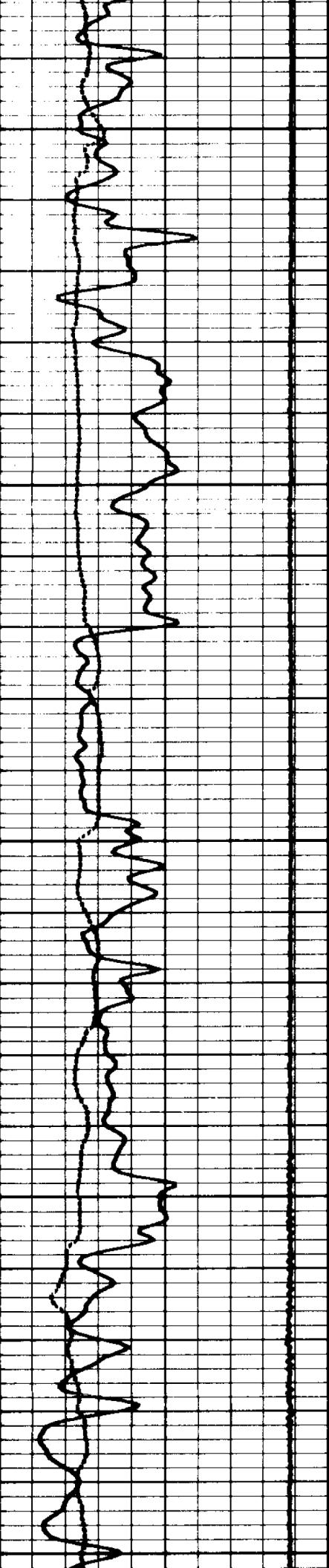




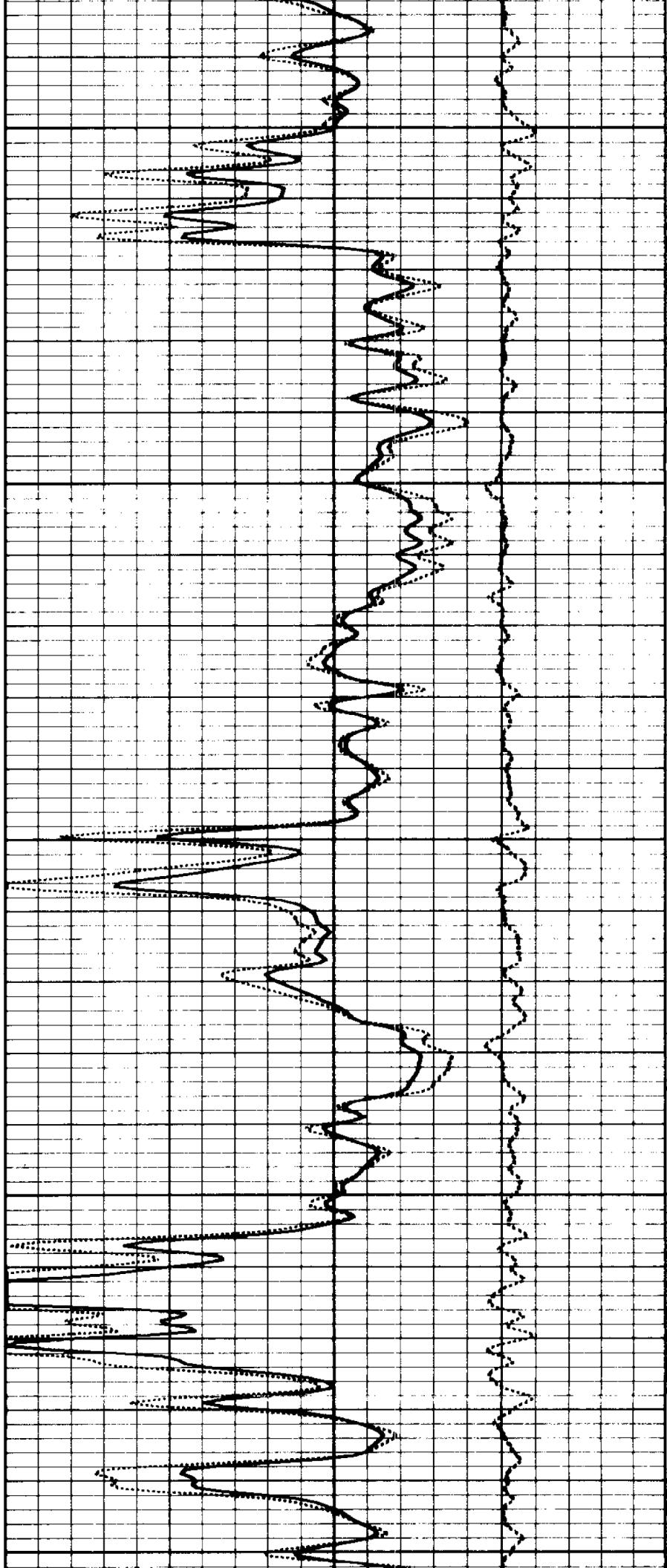
02600



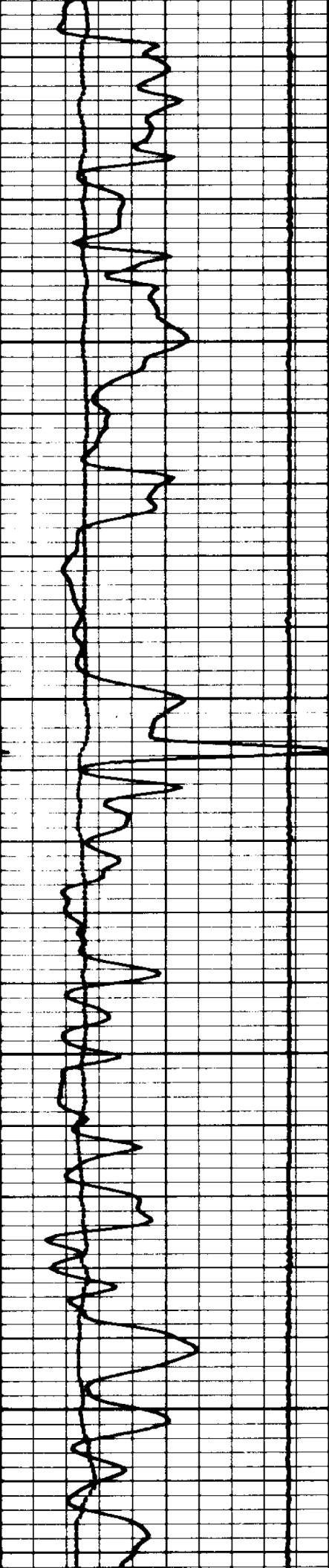
02700



02800

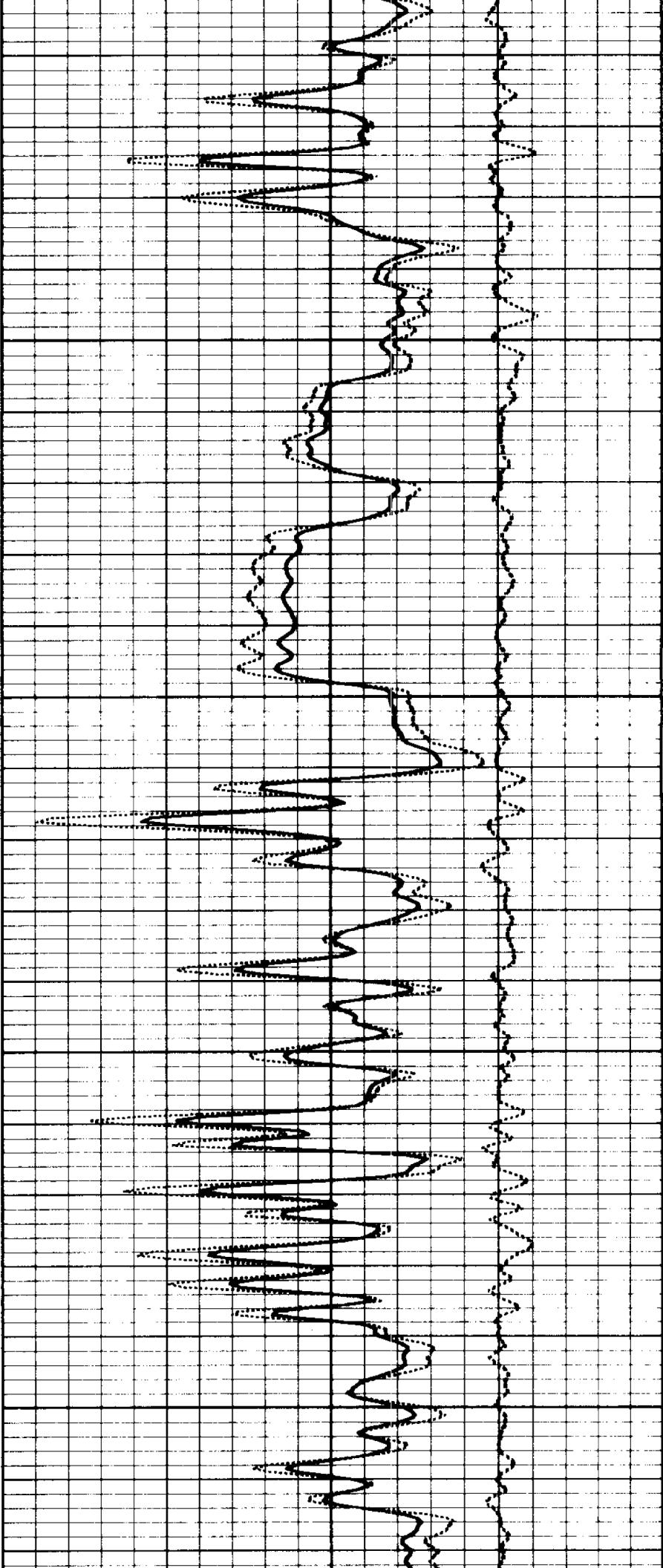


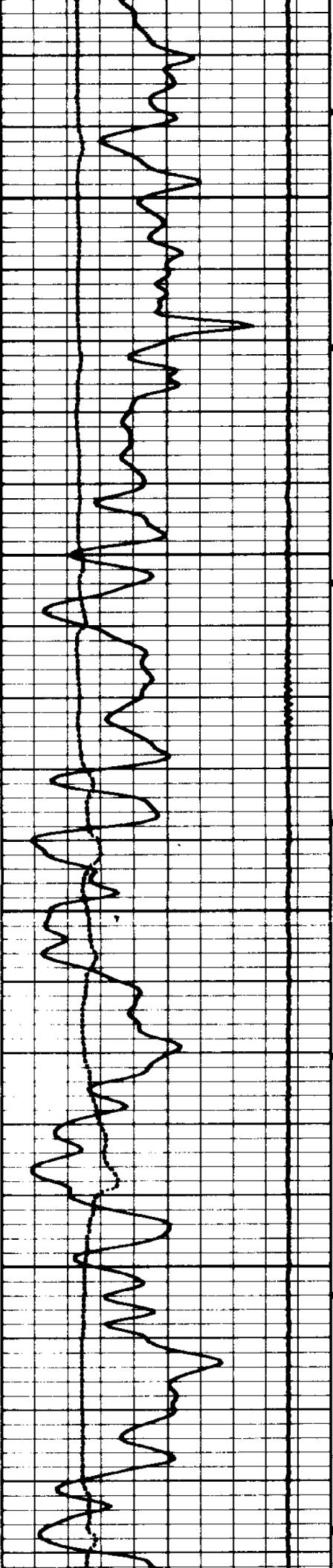
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03000

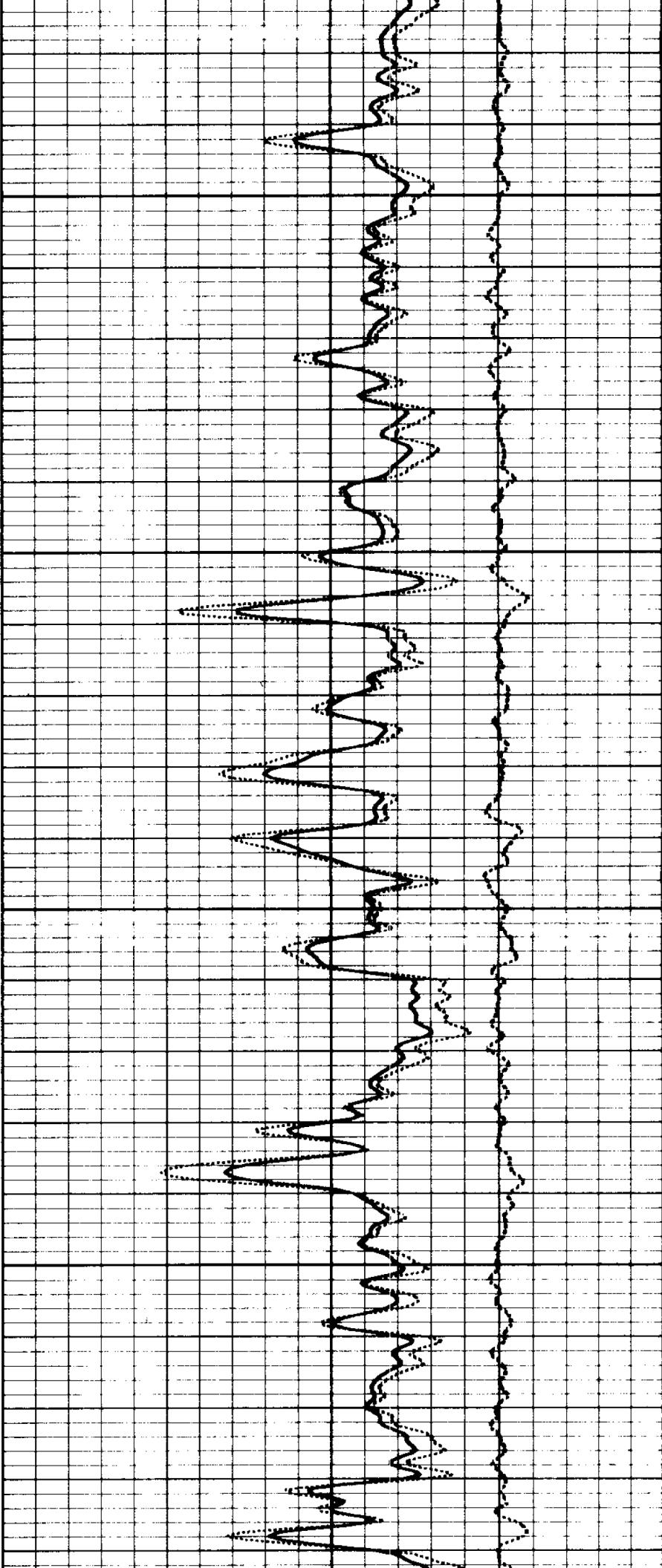
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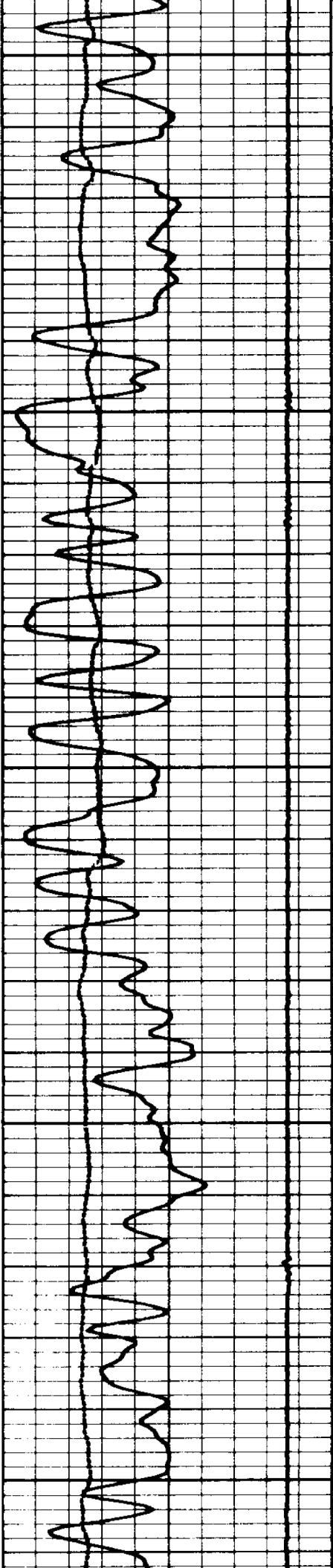




03200

03300

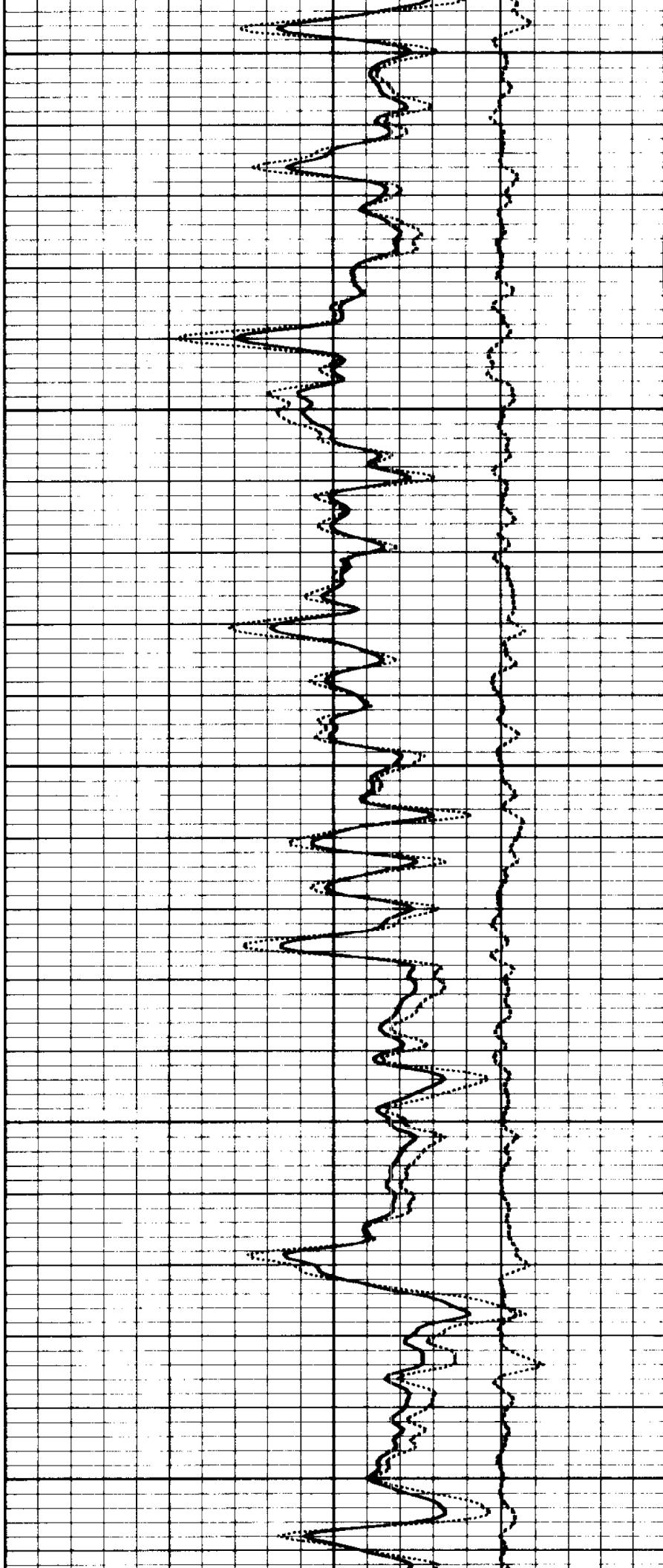


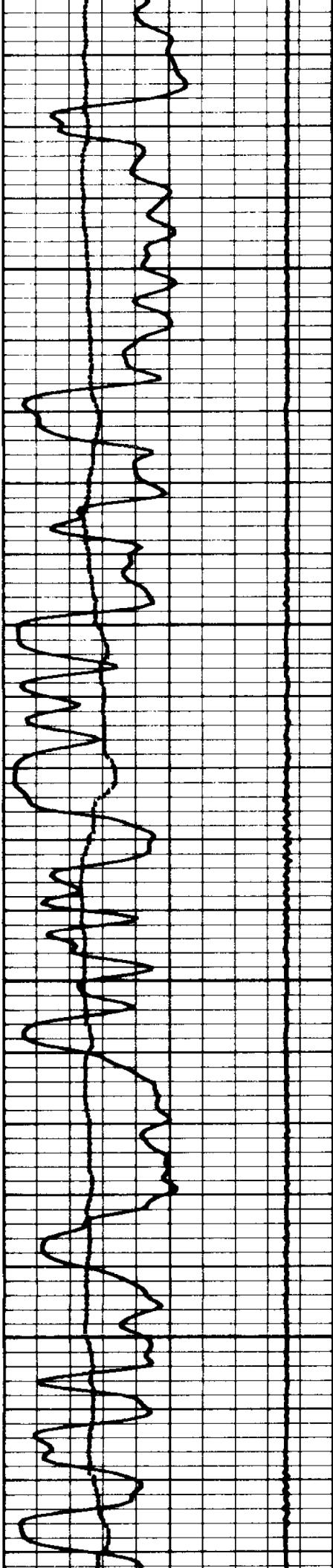


03400

03500

03600





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03800

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03700

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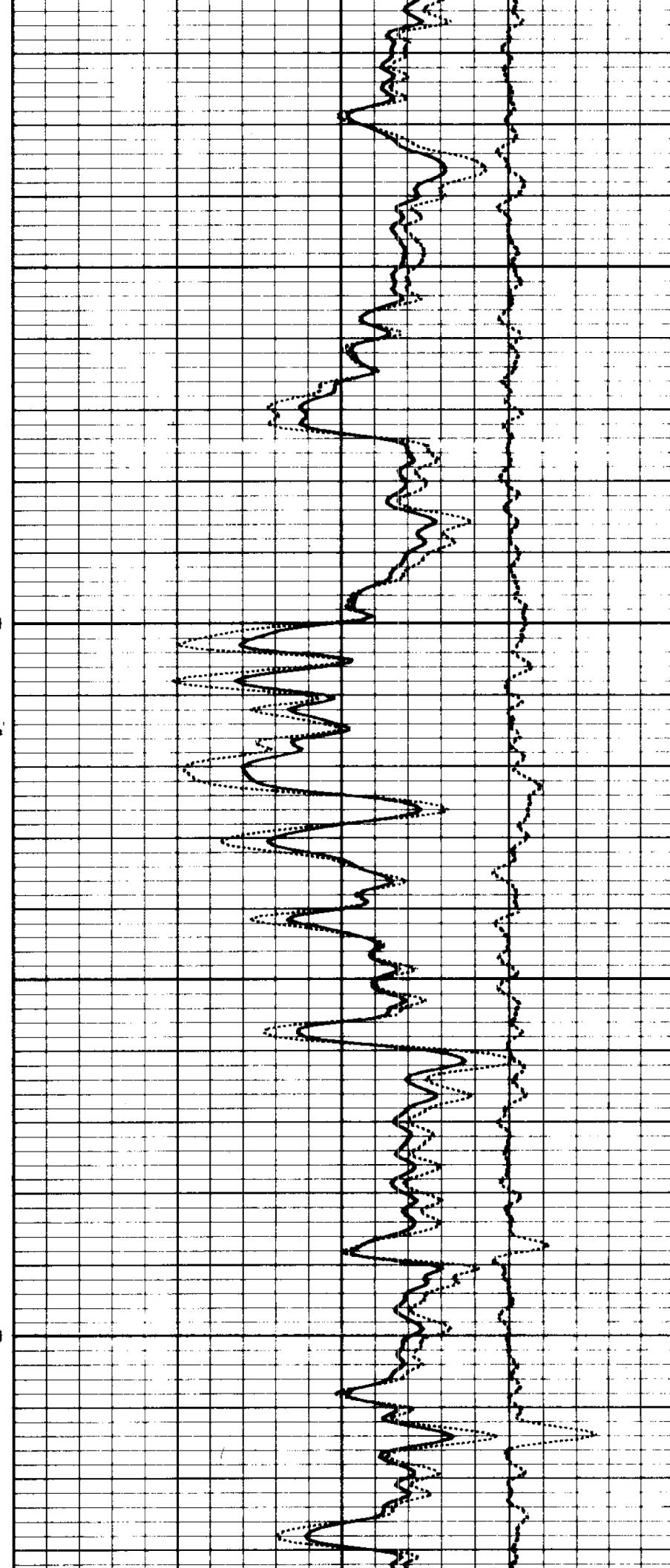
67

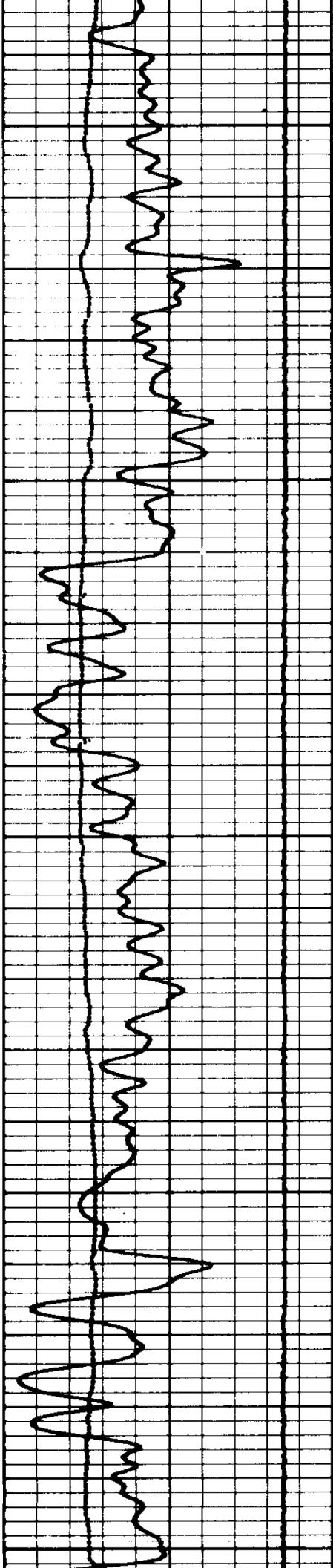
68

69

70

71



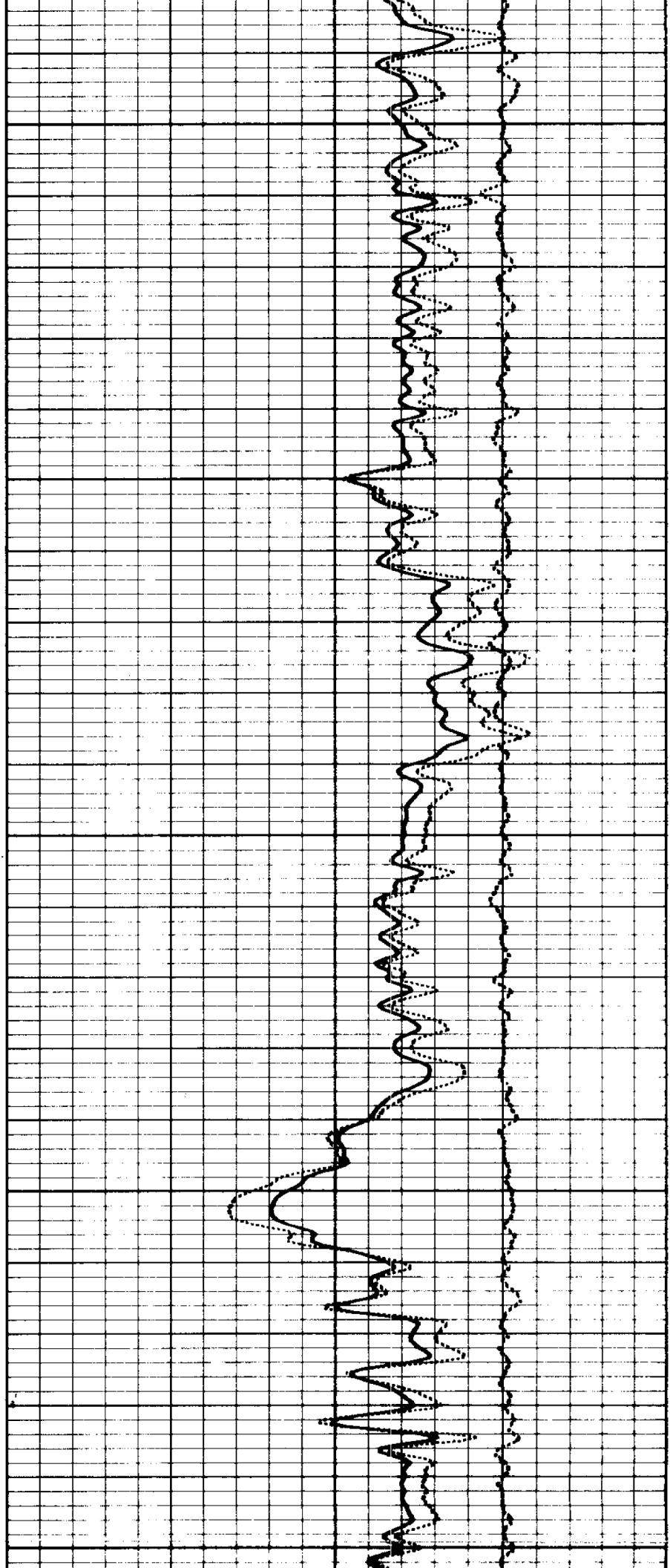


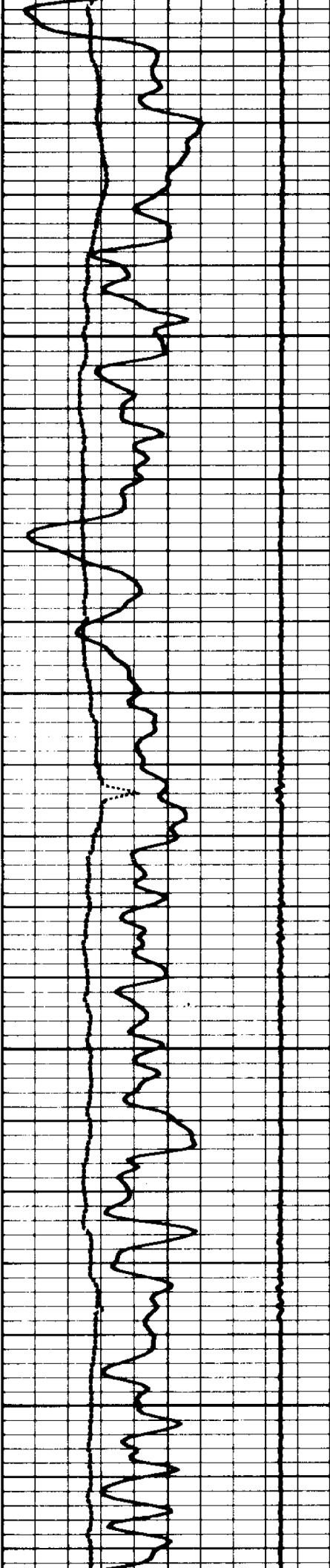
03900

16

04000

15





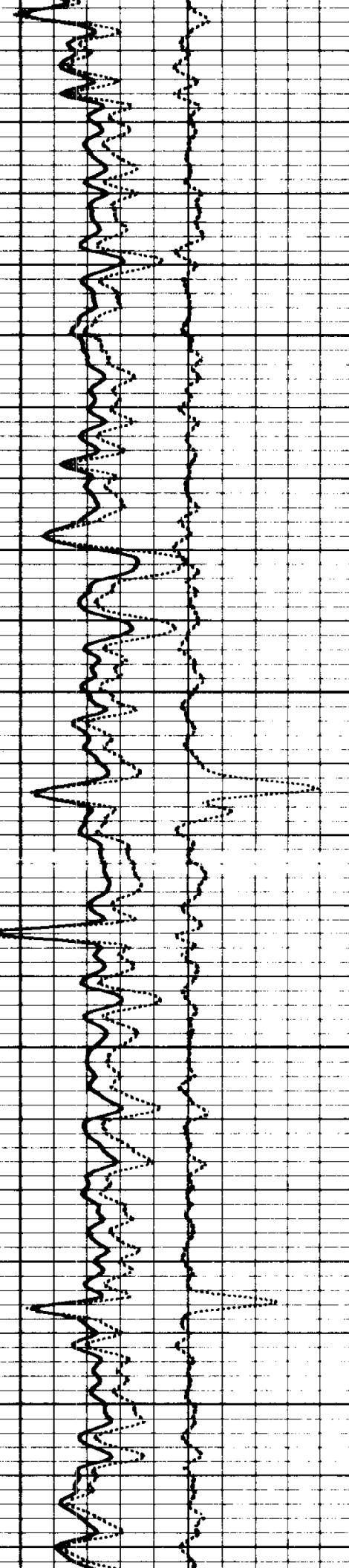
12

04100

13

04200

14



12

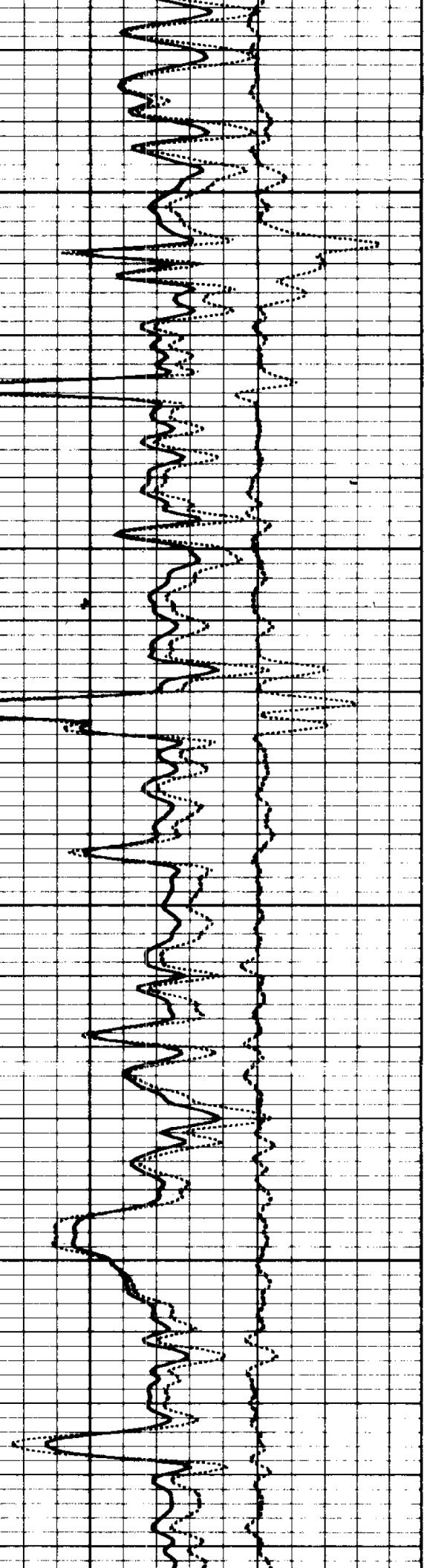
04300

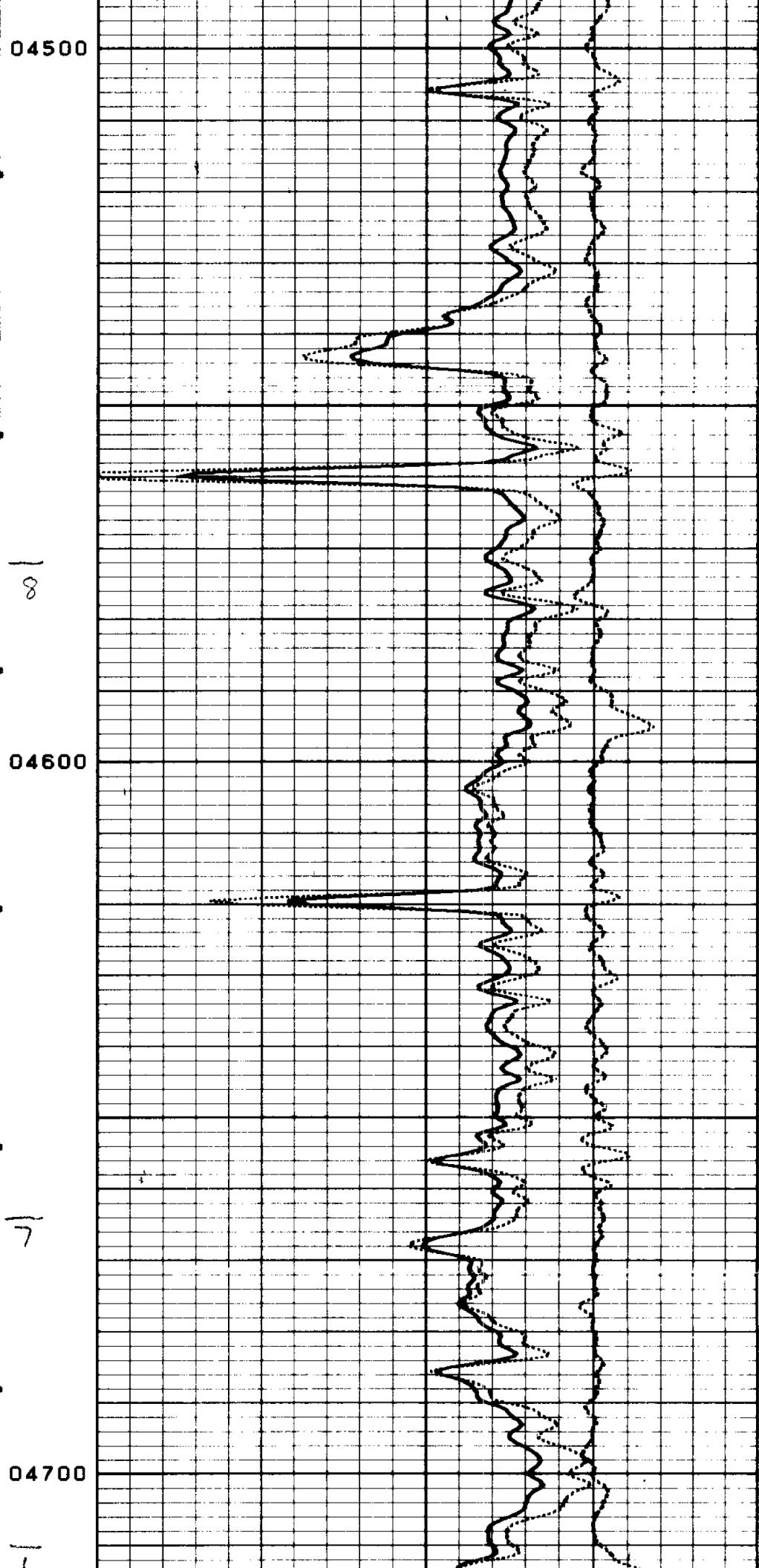
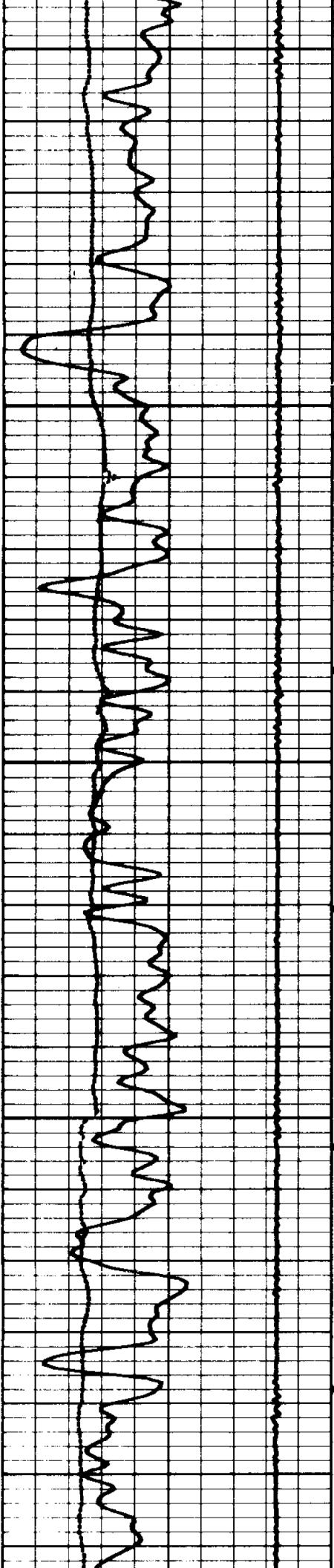
11

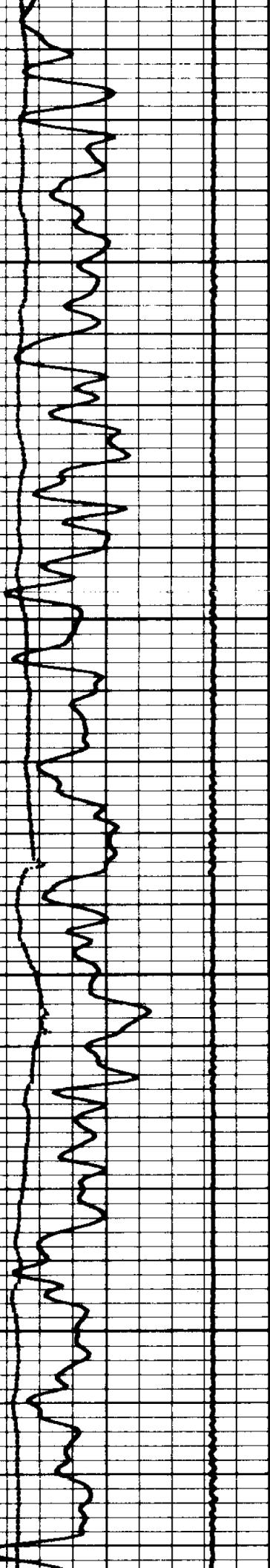
04400

10

9

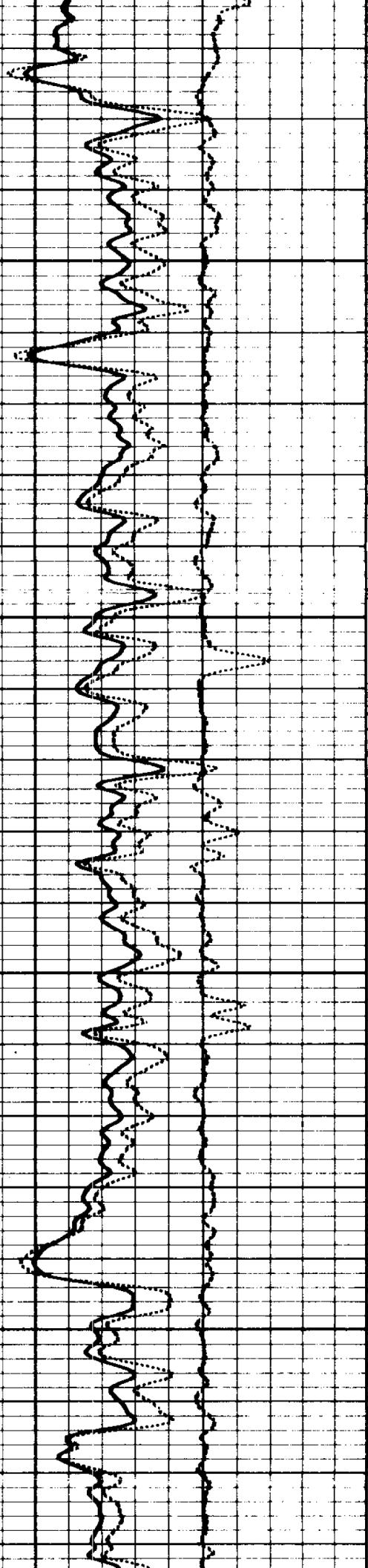




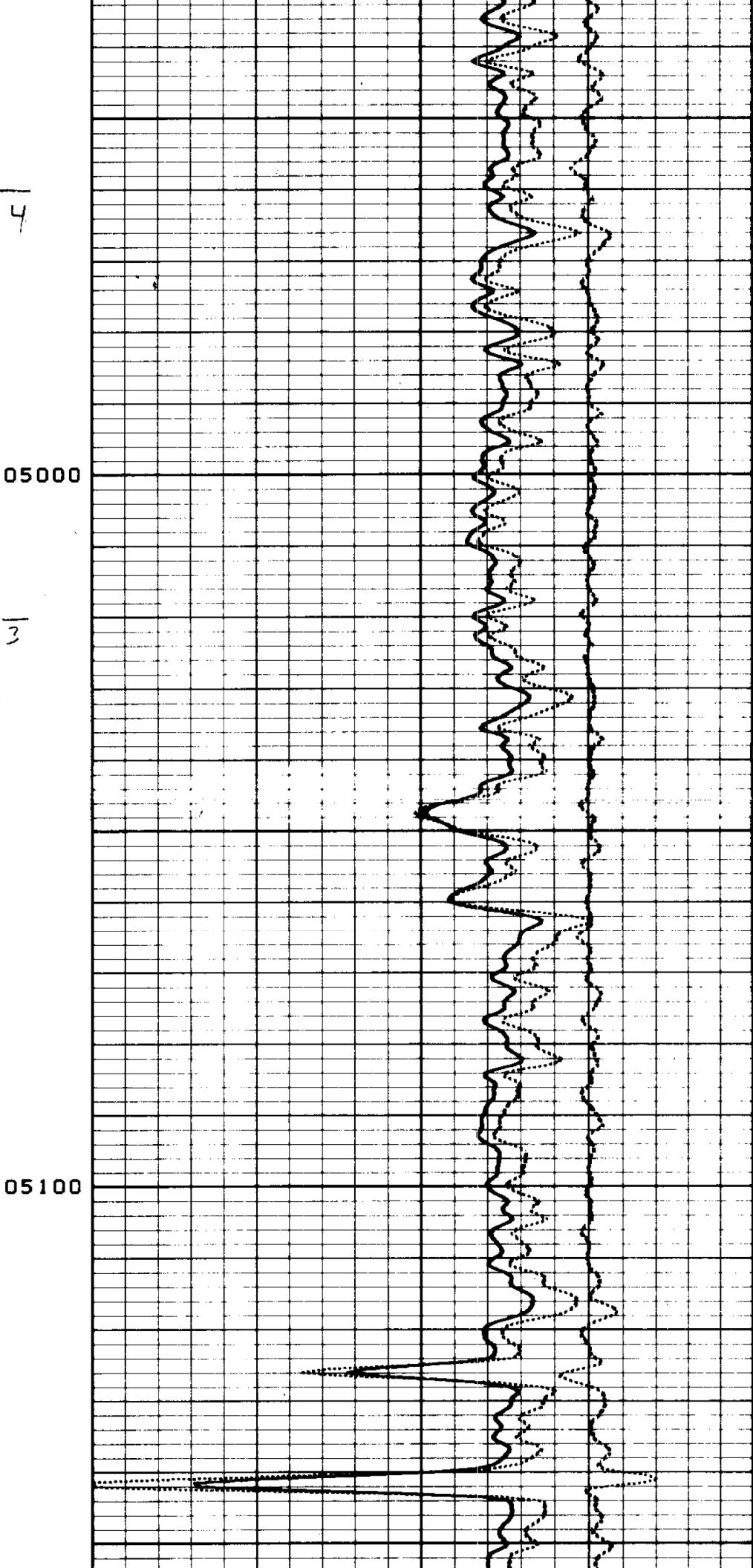
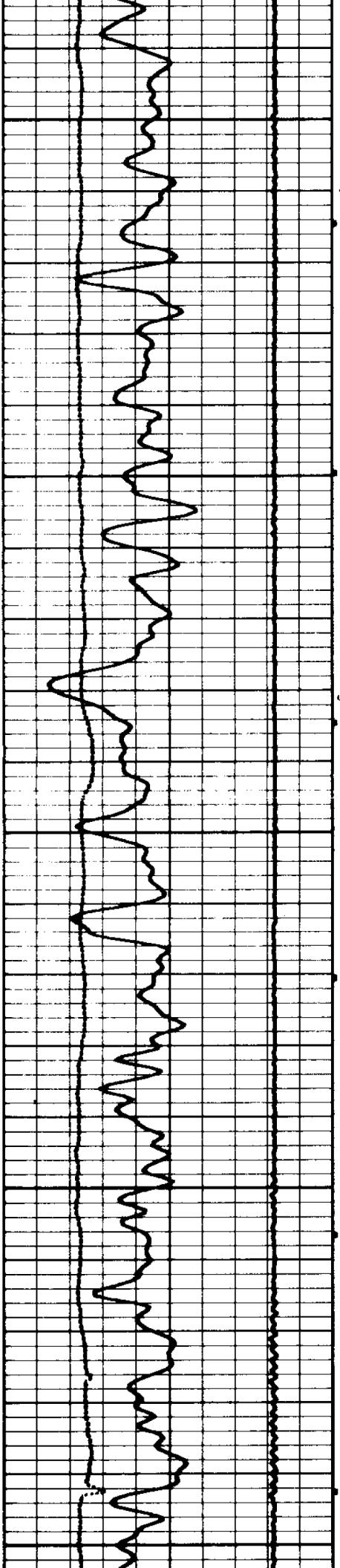


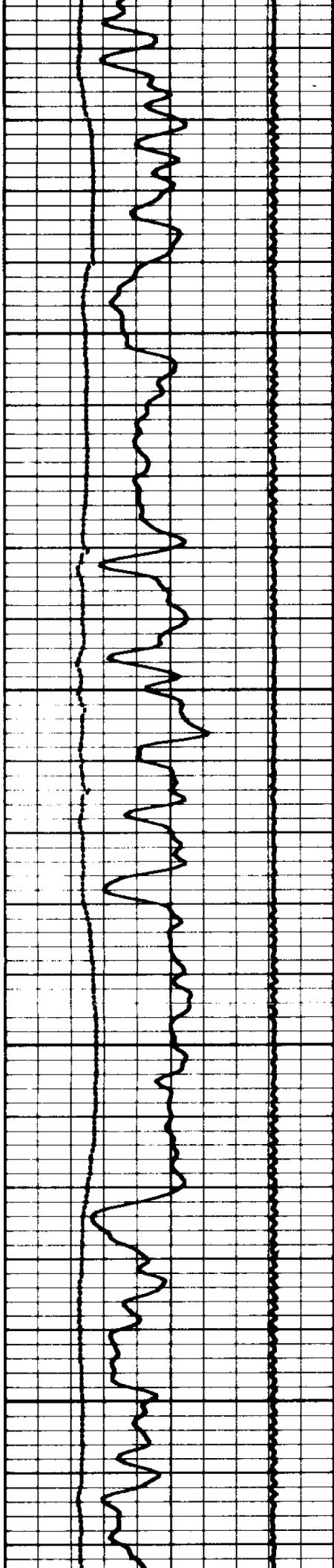
04800

51



04900



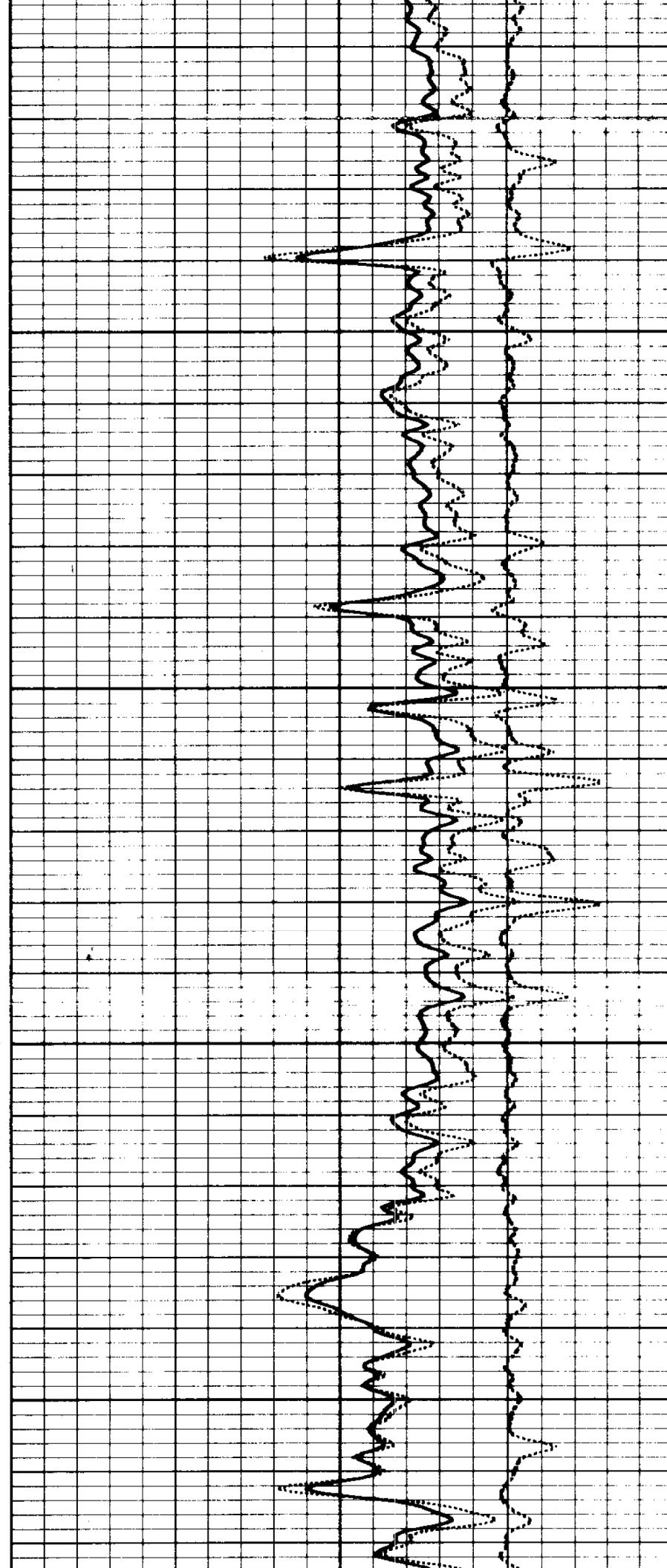


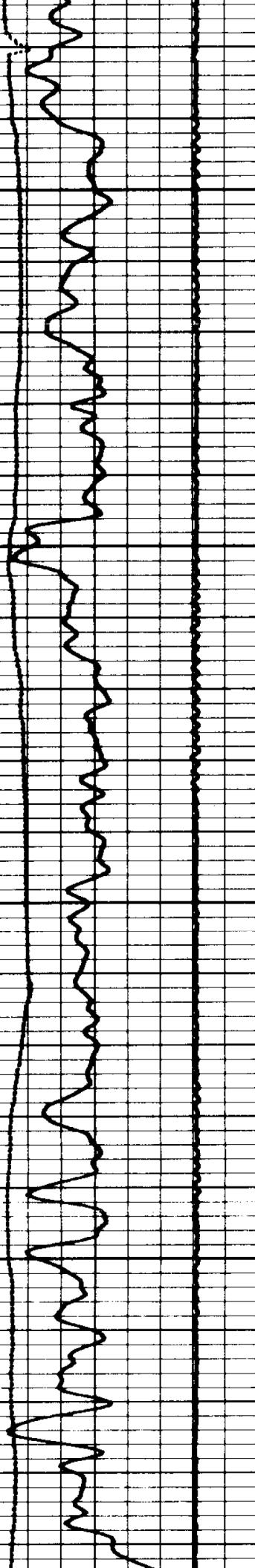
05200

05300

-1

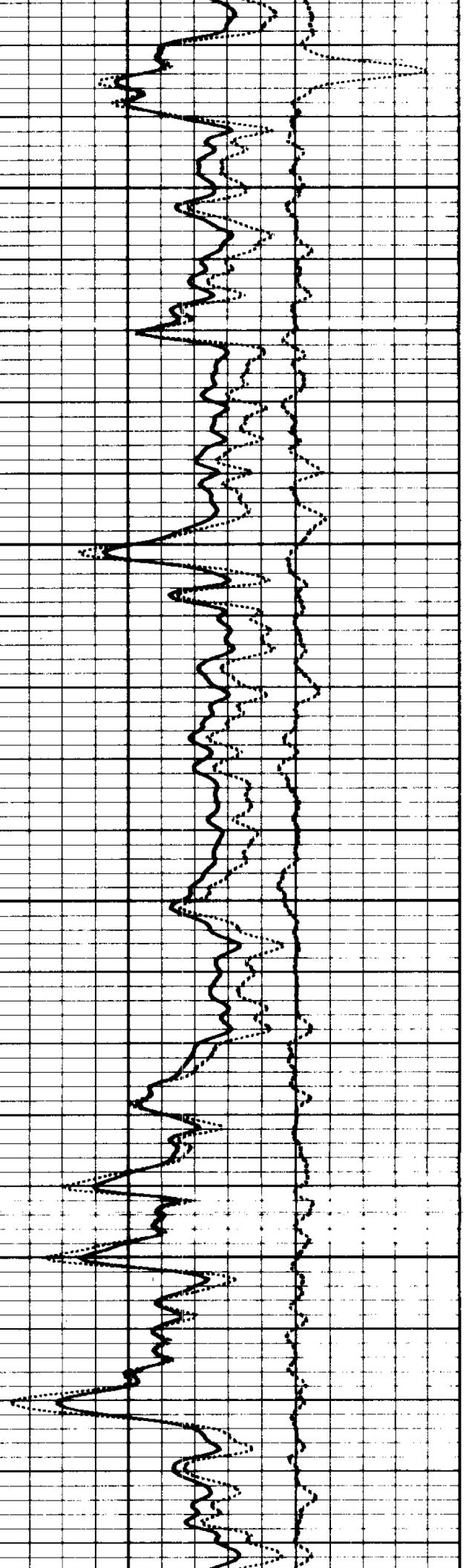
2





05400

This seismogram trace shows a continuous waveform across the entire vertical range. The signal is relatively stable with minor noise fluctuations.



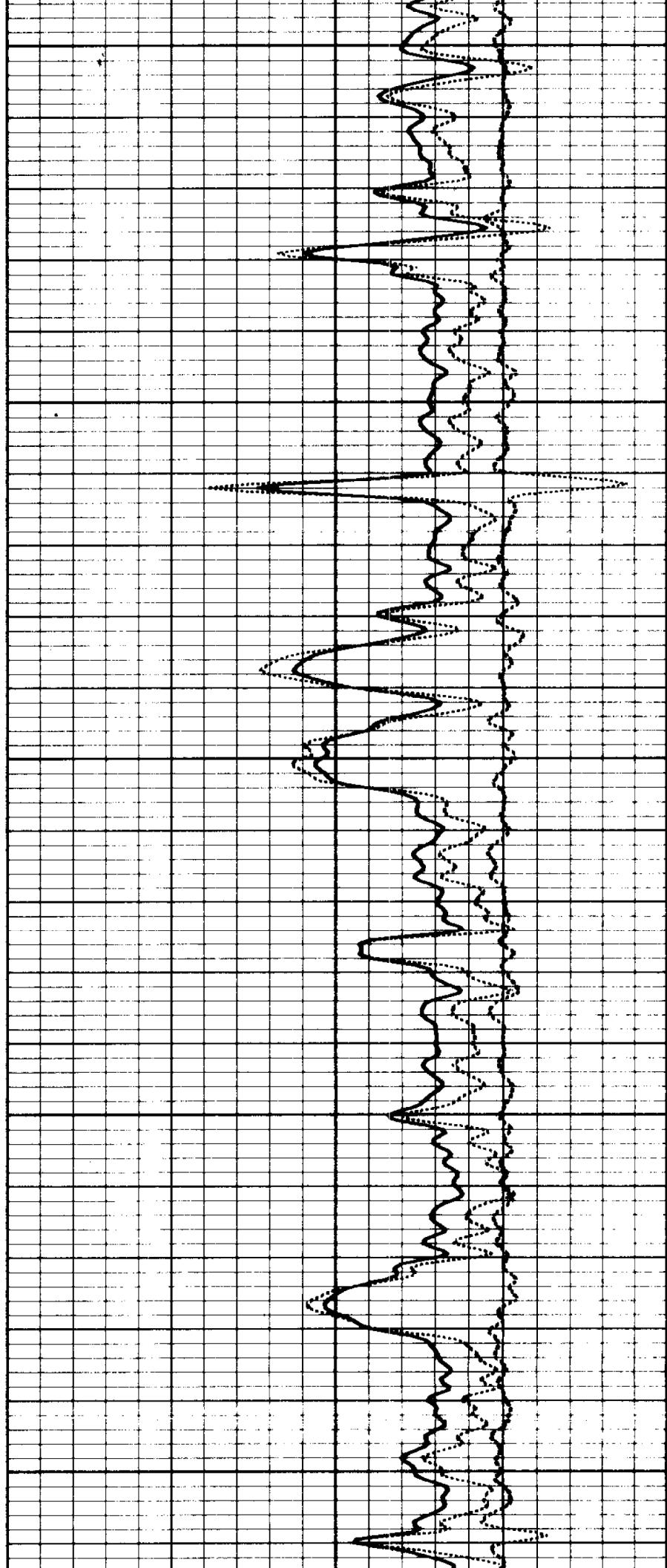
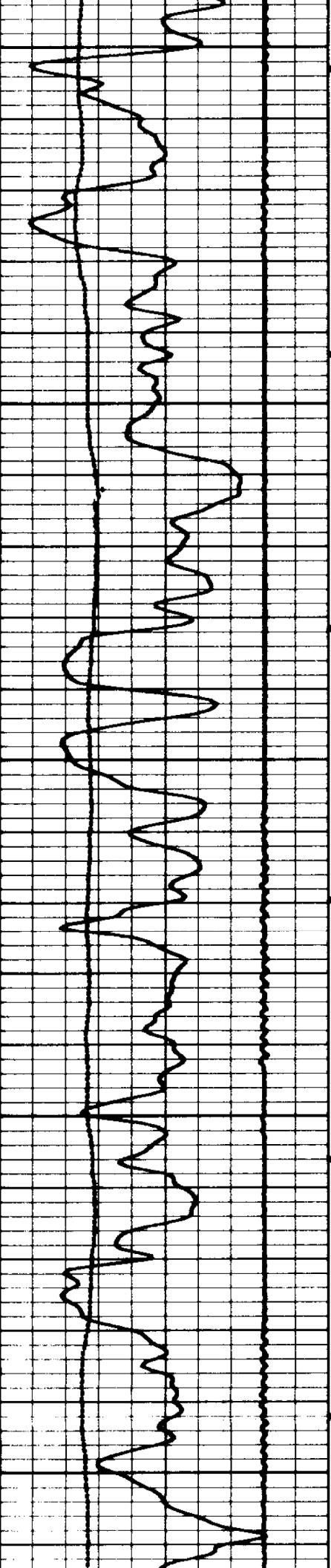
05500

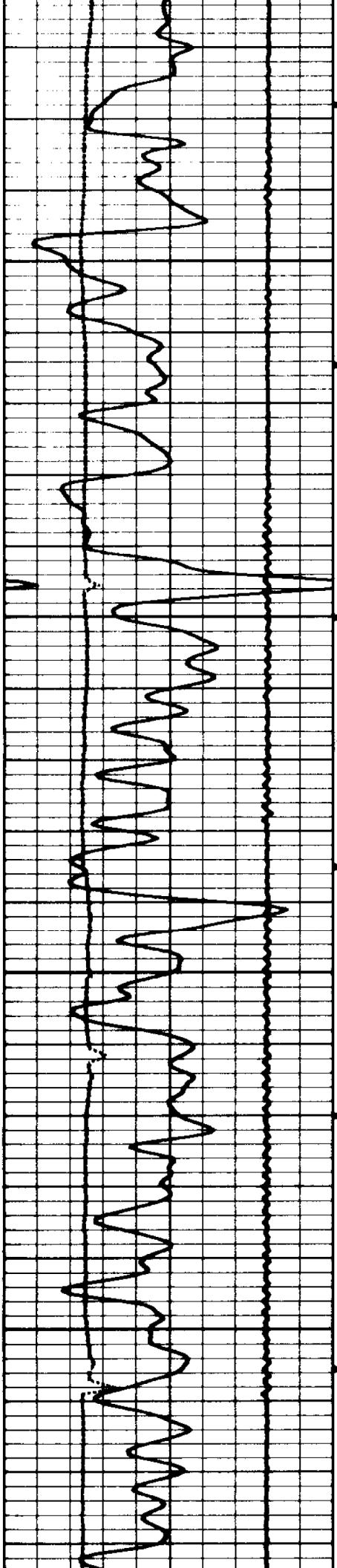
This seismogram trace shows a continuous waveform across the entire vertical range. The signal exhibits more pronounced, higher-frequency oscillations compared to the 05400 trace.

05600
Carb

05700

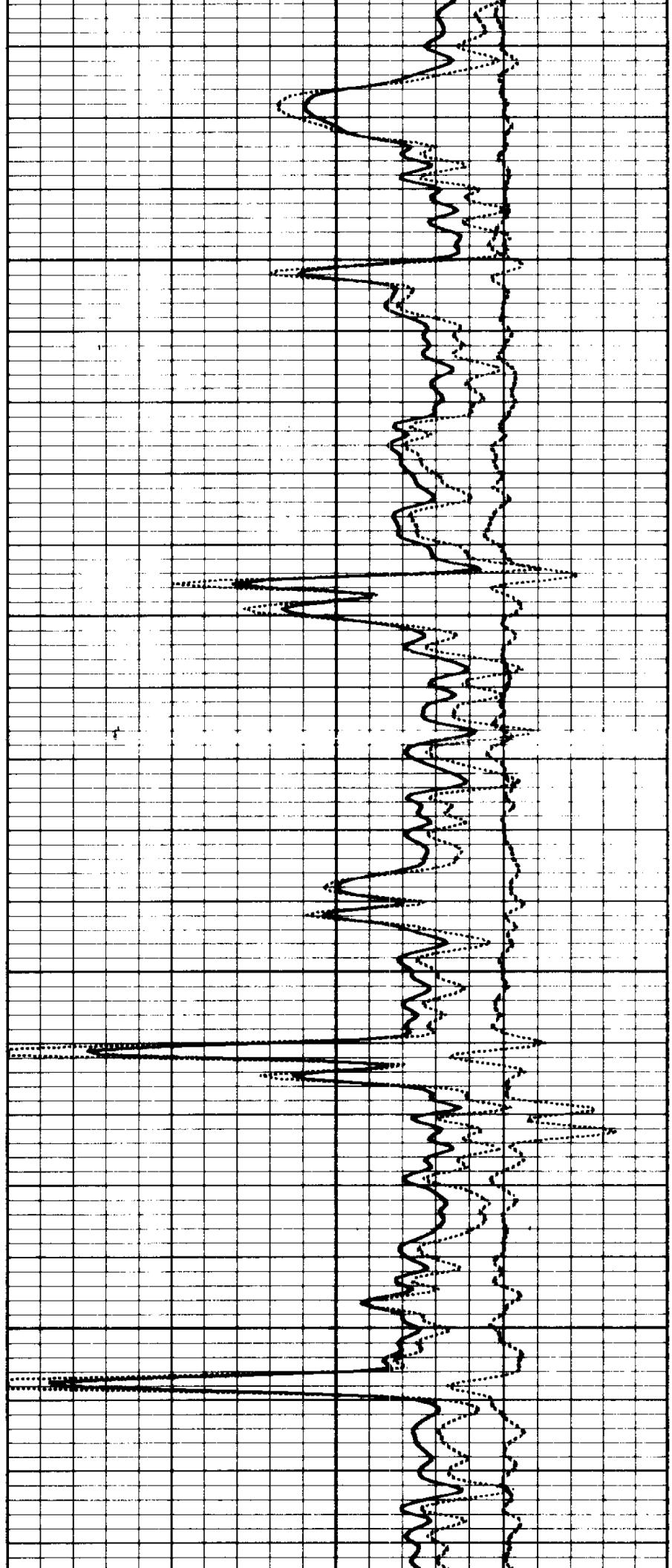
05800

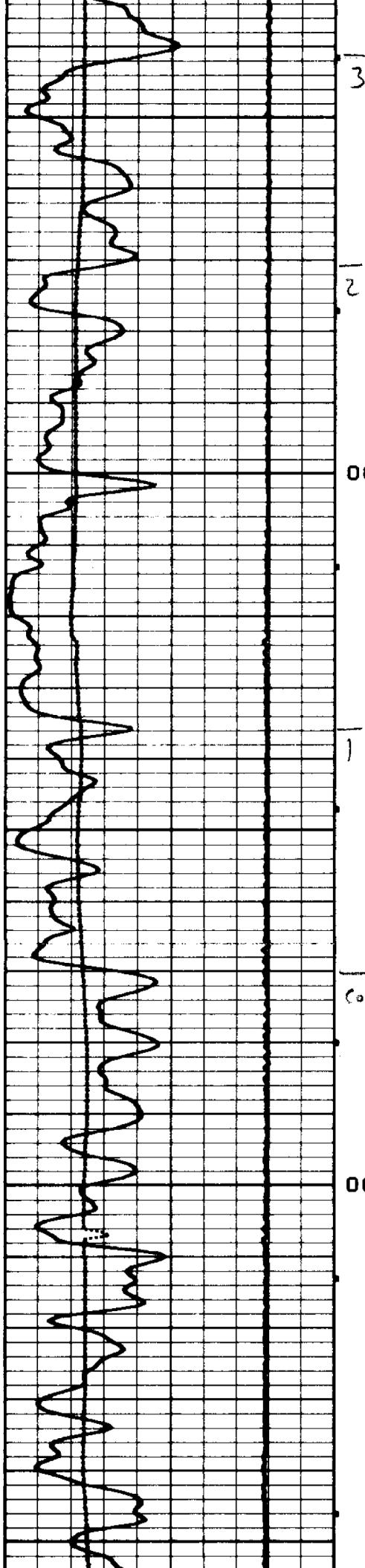




05900

06000

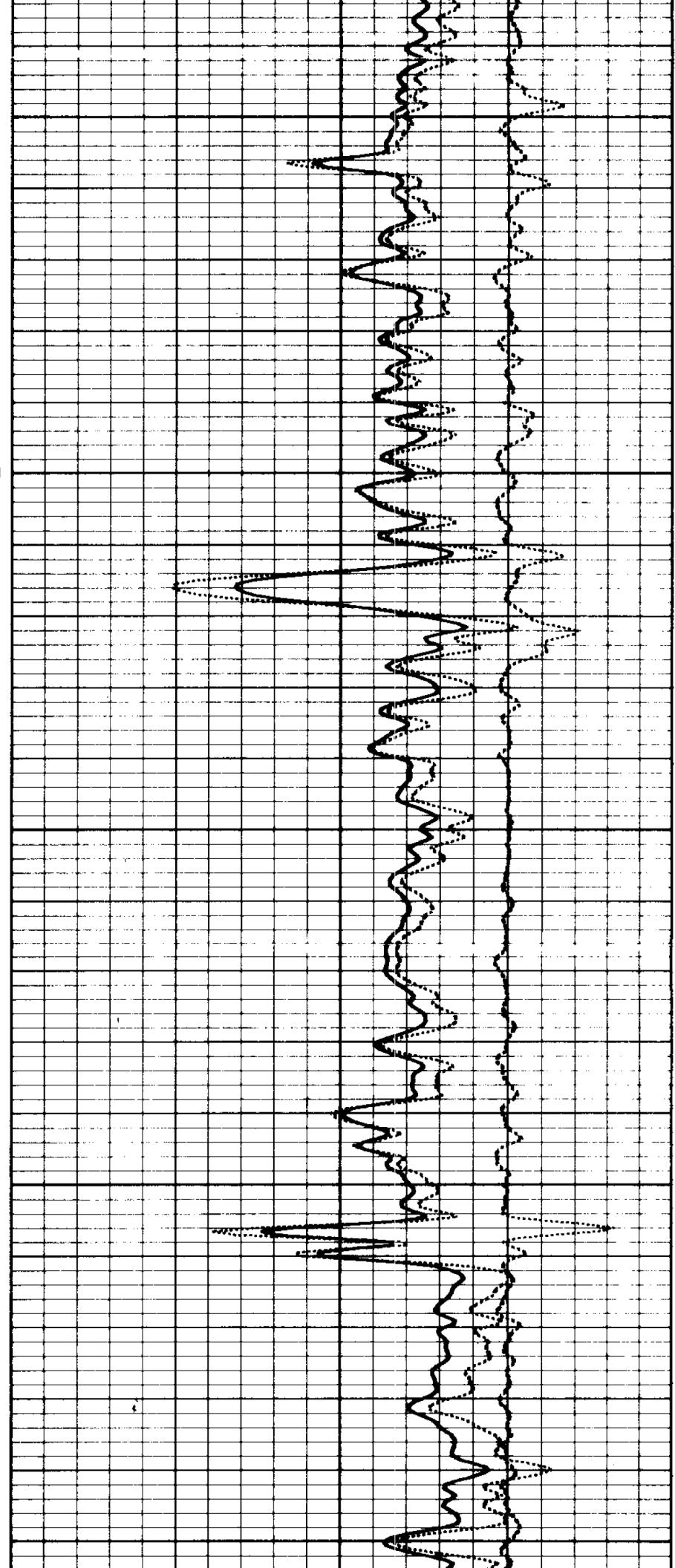


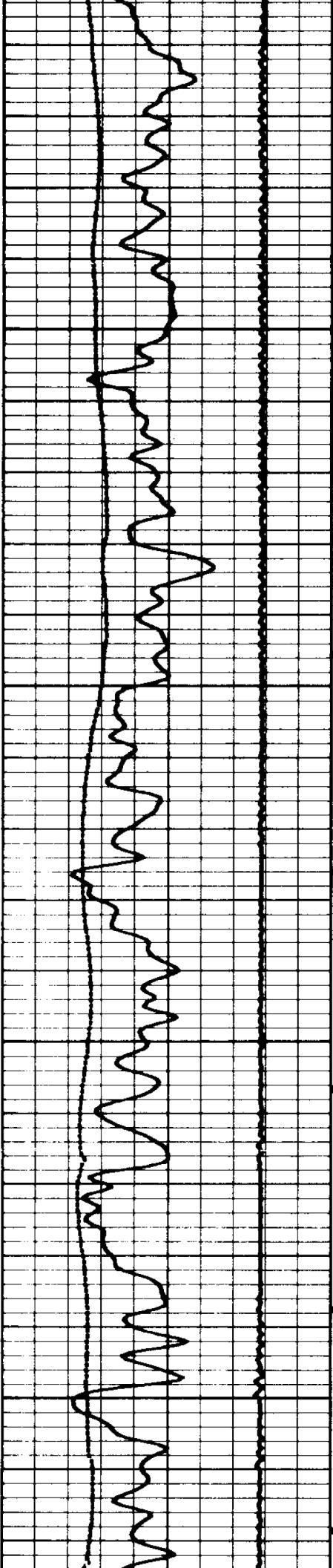


06100

Colton

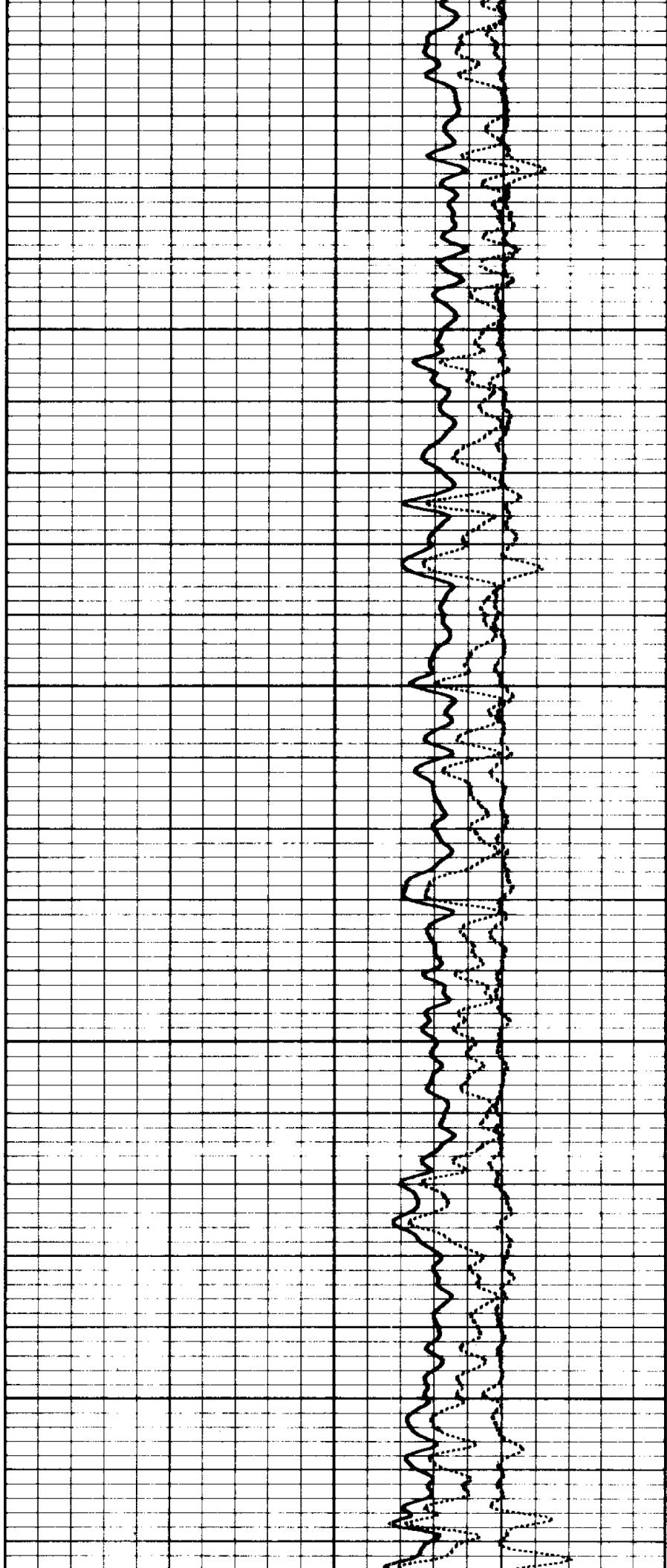
06200

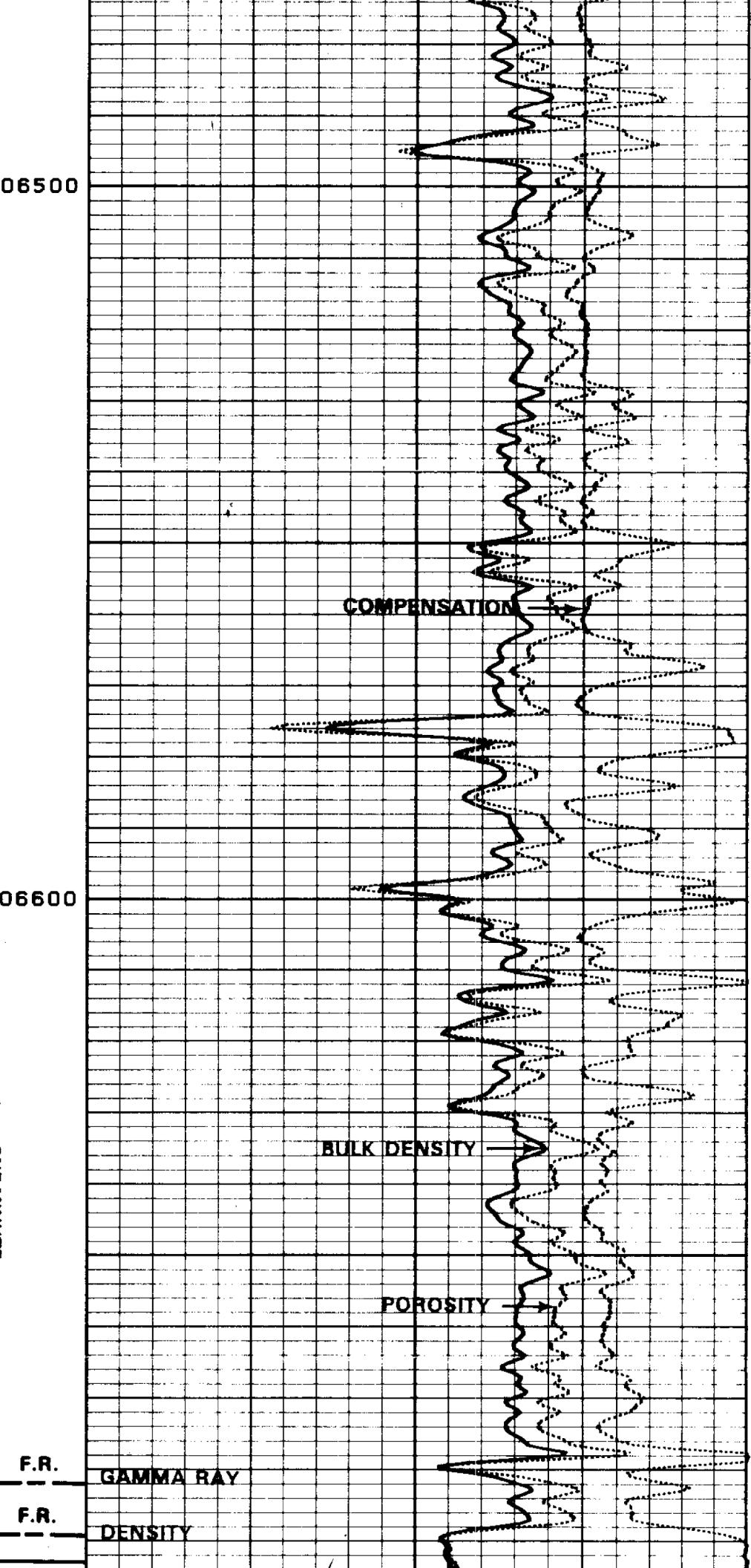
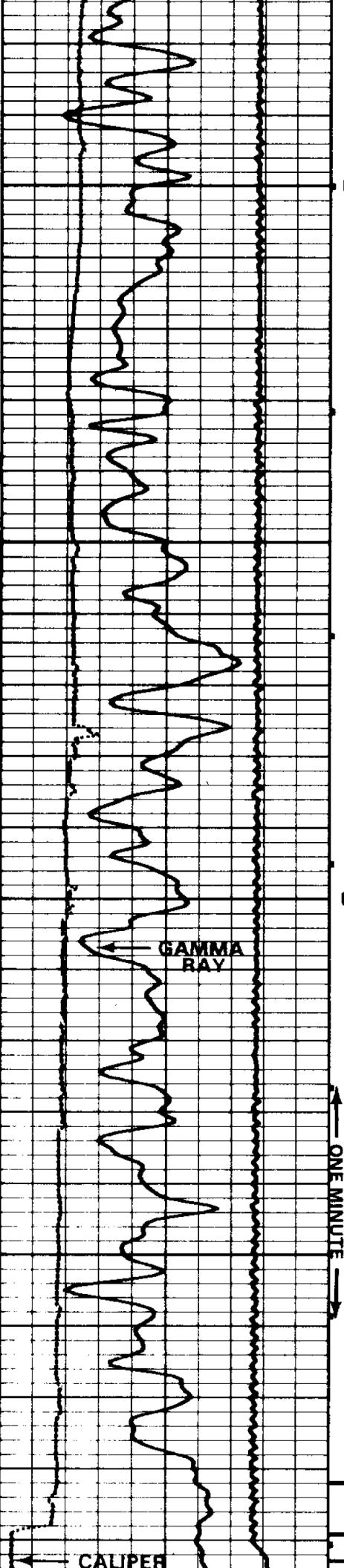




06300

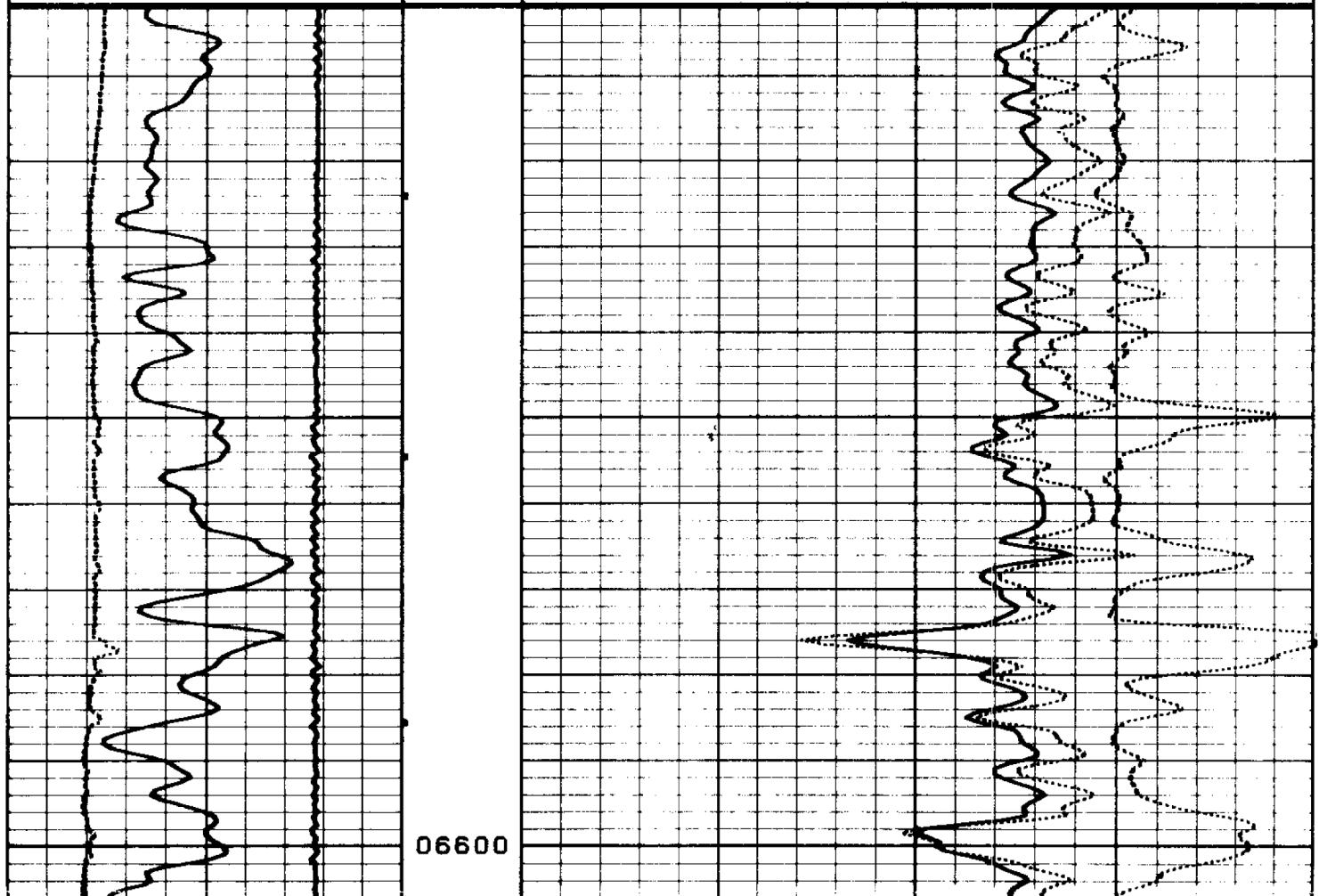
06400

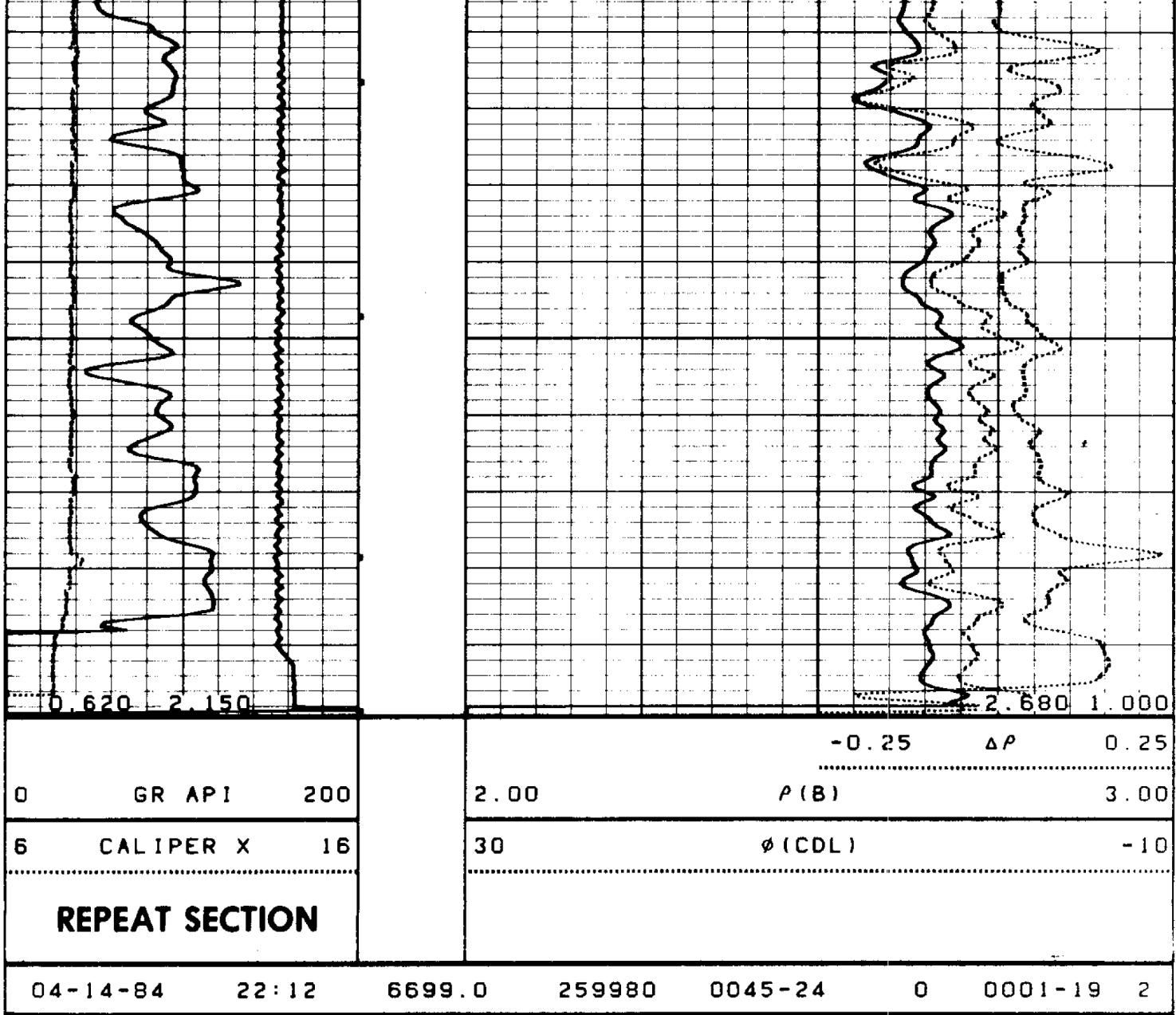




TENSION →		T.D.	06700				
0.620	2.150						2.680 1.000
0	GR API	200			-0.25	ΔP	0.25
6	CALIPER X	16		2.00	P(B)		3.00
				30	Ø(CDL)		-10
04-14-84	22:23	6710.5	259980	0045-24	0	0001-19	3

04-14-84	22:16	6501.5	259980	0045-24	0	0001-19	2
0	GR API	200		-0.25	ΔP	0.25	
6	CALIPER X	16	2.00	P(B)		3.00	
REPEAT SECTION							





GAMMA RAY

BACKGROUND	CALIBRATOR	STANDARD	UNITS
160.5	688.3	120.0	GAPI
DELTA COUNTS PER SEC: 527.8		CPS/API = 4.398	

COMPENSATED DENSITY SHOP CALIBRATION

DATE PERFORMED: 04-13-84

DENSITY DETECTOR

	MAG BLK (CPS)	ALUM BLK (CPS)	SPINE ANGLE	DEN/SPINE RATIO
LS DETECTOR	1032.3	232.7	75	0.572
SS DETECTOR	480.6	329.7		

COMPENSATED DENSITY BEFORE SURVEY TOOL CHECK**DENSITY DETECTOR**

	FIELD CHECK	UNITS
LS DETECTOR	231.4	CPS
SS DETECTOR	329.7	CPS
BULK DENSITY	2.596	G/CC
DENSITY CORR	0.003	G/CC

COMPENSATED DENSITY AFTER SURVEY TOOL CHECK**DENSITY DETECTOR**

	FIELD CHECK		
	BEFORE	AFTER	UNITS
LS DETECTOR	231.4	231.0	CPS
SS DETECTOR	329.7	328.4	CPS
BULK DENSITY	2.596	2.594	G/CC
DENSITY CORR	0.003	0.000	G/CC

	MEASURED			CALIBRATED		
	SMALL	LARGE	UNITS	SMALL	LARGE	UNITS
CALX	3666	6964	MV	7.00	14.00	IN

CALIPER CASING CHECK

MEASURED CASING ID = 7.68 IN

GEARHART

DUAL LATEROLOG
MSFL

FILING NO.	COMPANY	COORS ENERGY COMPANY	RECEIVED
259980	WELL	UTE TRIBAL NO. 2-20	JUL 12 1984
	FIELD	UTE TRIBAL	ATO. OIL & GAS CONS. COMM.
	COUNTY	DUCHESSNE	STATE
			UTAH
LOCATION: 43-013-30882			
SEC	20	TWP	SW/NE 1980' FNL & 1980 FEL
Permanent Datum	G.L.A. K.B.	SS	Elev. 6404' 13.5 Ft. Above Perm. Datum
Log Measured from	K.B.	RGE	3W
Drilling Measured from			
Date	4-14-84		
Run No.	ONE		
Depth-Driller	6694'		
Depth-Logger	6694'		
Bottom Logged Interval	6689'		
Top Logged Interval	398'		
Casing-Driller	85/8@ 400	@	
Casing-Logger	398		
Bit Size	7-7/8		
Type Fluid in Hole	CLEAR KCL BRINE		
pH and Fluid Loss	8.5	- cc	cc
Density and Viscosity	8.6	27	cc
Source of Sample	FLOWLINE		
Rm @ Meas. Temp.	-	@ °F	@ °F
Rmf @ Meas. Temp.	-	@ °F	@ °F
Rmc @ Meas. Temp.	-	@ °F	@ °F
Source Rmf Rmc			
Rm @ BHT	-	@ °F	@ °F
Rmf @ BHT	-	@ °F	@ °F
Rmc @ BHT	-	@ °F	@ °F
Run @ BHT	.062	154 °F	@ °F
End Circulation	13:30	4-14-84	
Logger on Bottom	17:27	4-14-84	
Max. Rec. Temp. Deg. F.	154	°F	°F
Equip. No. and Location	7571	VERNAL	
Recorded By	SLATKY, WACH		
Witnessed By	MR. BALLOU		

Changes in Mud Type or Additional Samples

Date	Sample No.	Type Log	Depth	Scale Up Hole	Scale Down Hole
Depth-Driller					
Type Fluid in Hole					
Dens.	Visc.				
pH	Fluid Loss	cc	cc		

EQUIPMENT DATA

DUAL LATEROLOG					GAMMA RAY	MSFL	Tool No.	Tool Type	Tool No.	Tool No.
Rm	@	°F	@	°F	Run No.	Tool No.	Tool Type	Tool Position	S.O.	Tool No.
Rmf	@	°F	@	°F	ONE	15082	FOCUSSED	CENTER	BOW SPRING	4442
Rmc	@	°F	@	°F						SCINT
Rm @ BHT	-	@ °F	-	@ °F						18013
Rmf @ BHT	-	@ °F	-	@ °F						
Rmc @ BHT	-	@ °F	-	@ °F						

CALIBRATION DATA

Run No.	LLD High	LLD Low	LLD Gain	LLS High	LLS Low	LLS Gain	MSFL SPAN	MSFL ZERO	PANEL #	GAMMA RAY		
										API Scale	BKG.	STD
ONE	284,200	-	1800	178,752	-	2075	825	-3.0	193	0-200	160	695

REMARKS:

NOTICE: All interpretations are opinions based on inferences from electrical or other measurements and we cannot, and do not, guarantee the accuracy or correctness of any interpretations, and we shall not, except in the case of gross or willful negligence on our part, be liable for any damages, direct or consequential, arising out of or resulting from any interpretation or recommendations made by us.

04-14-84

20:13

354.5

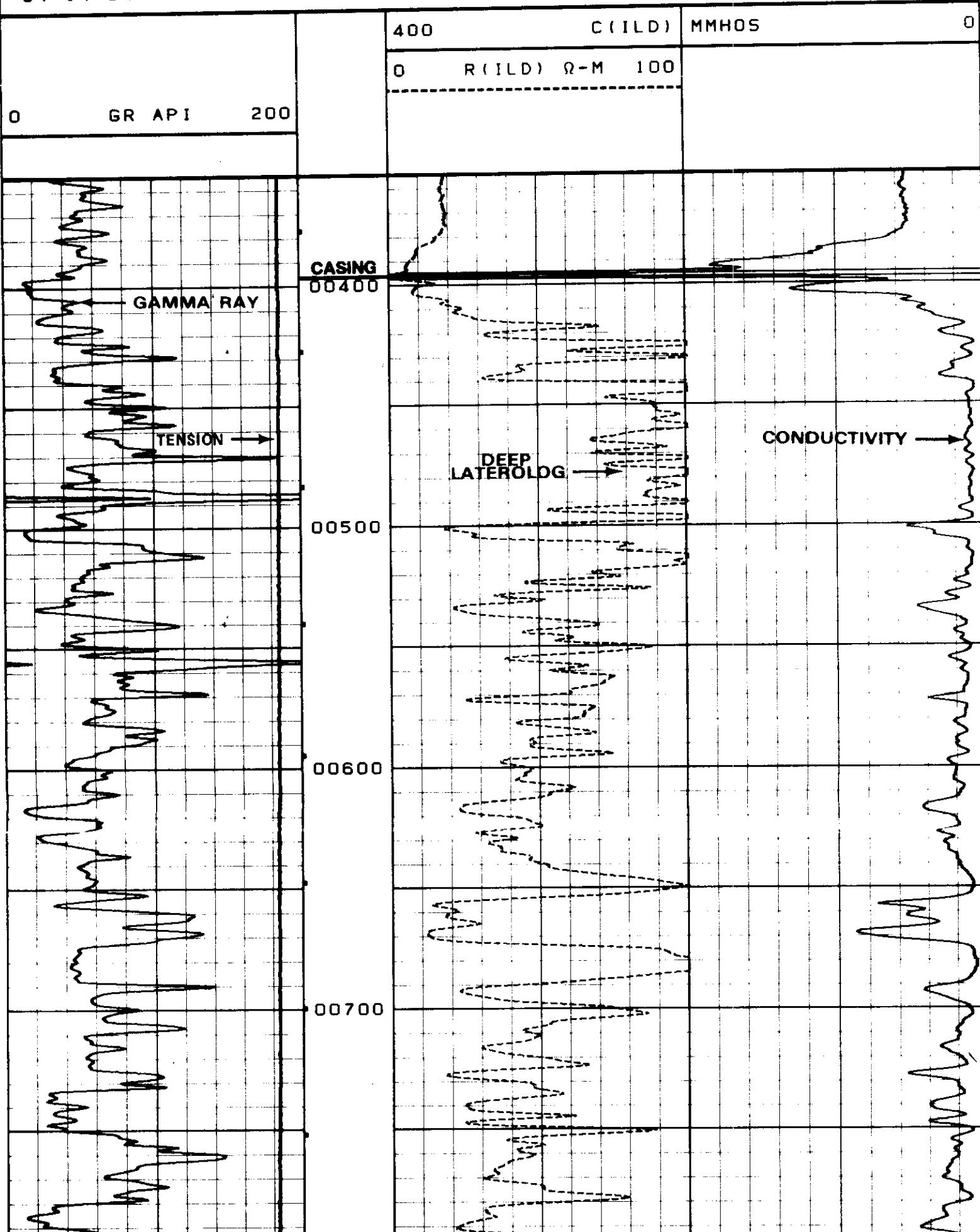
259980

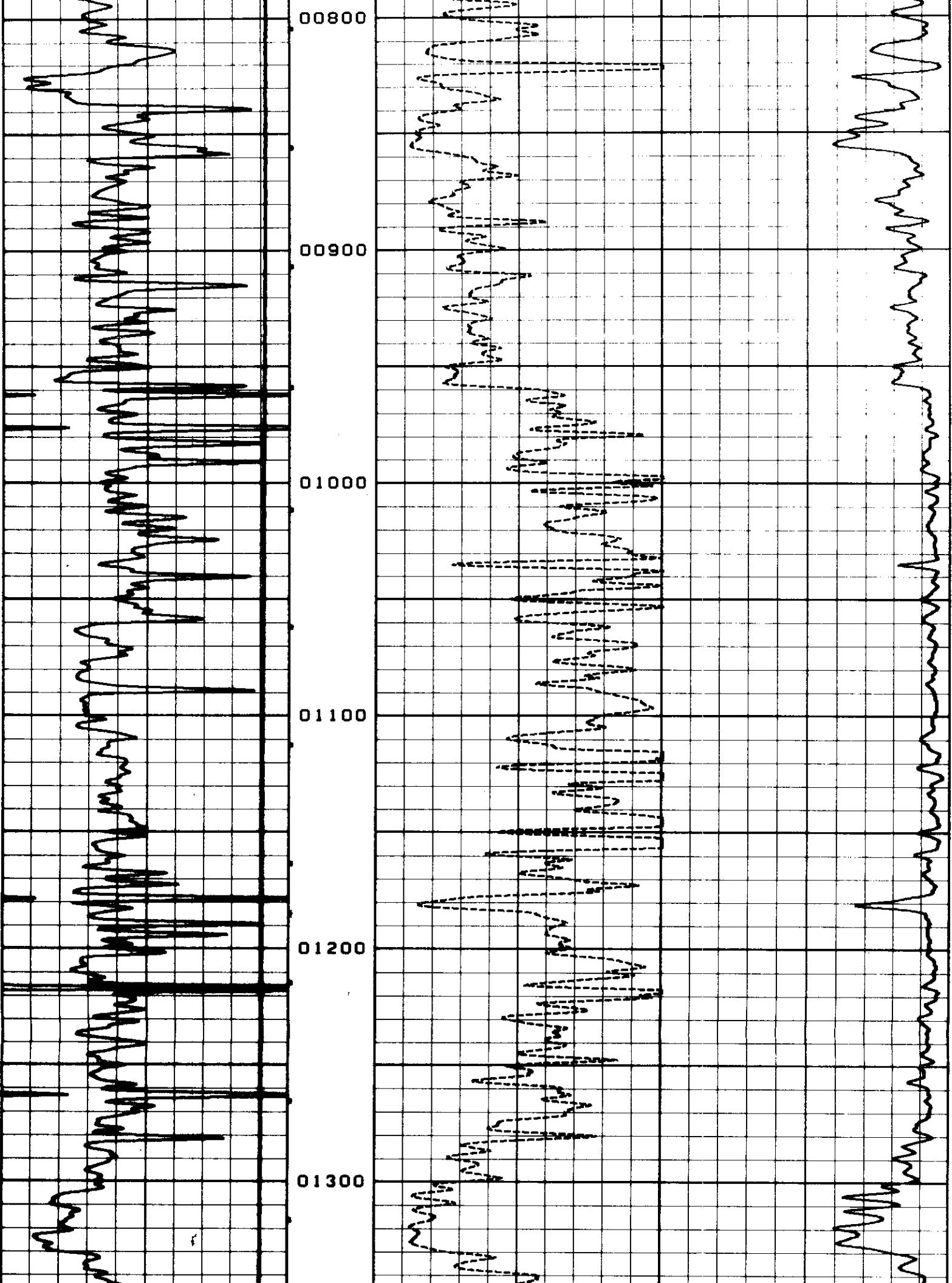
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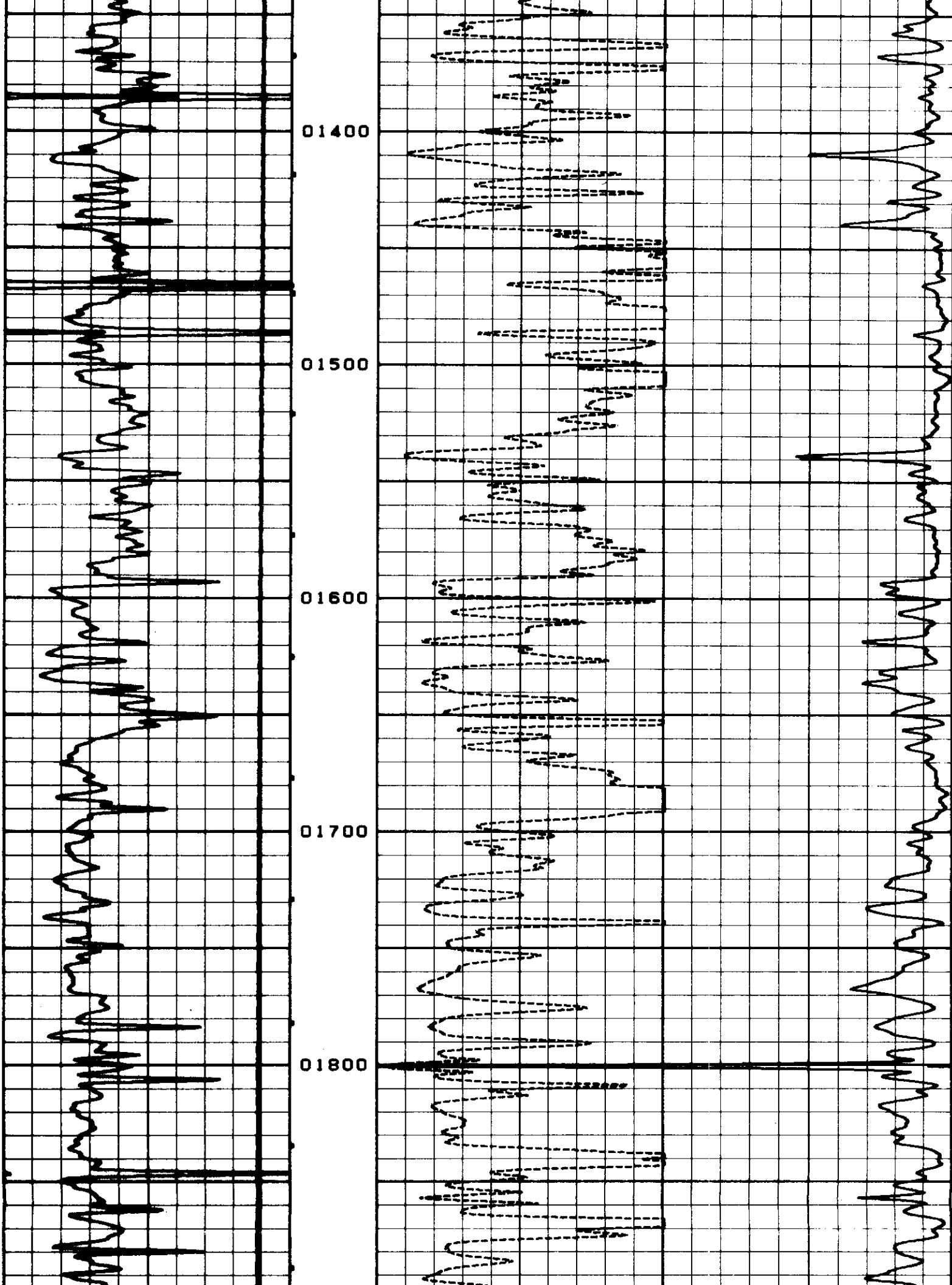
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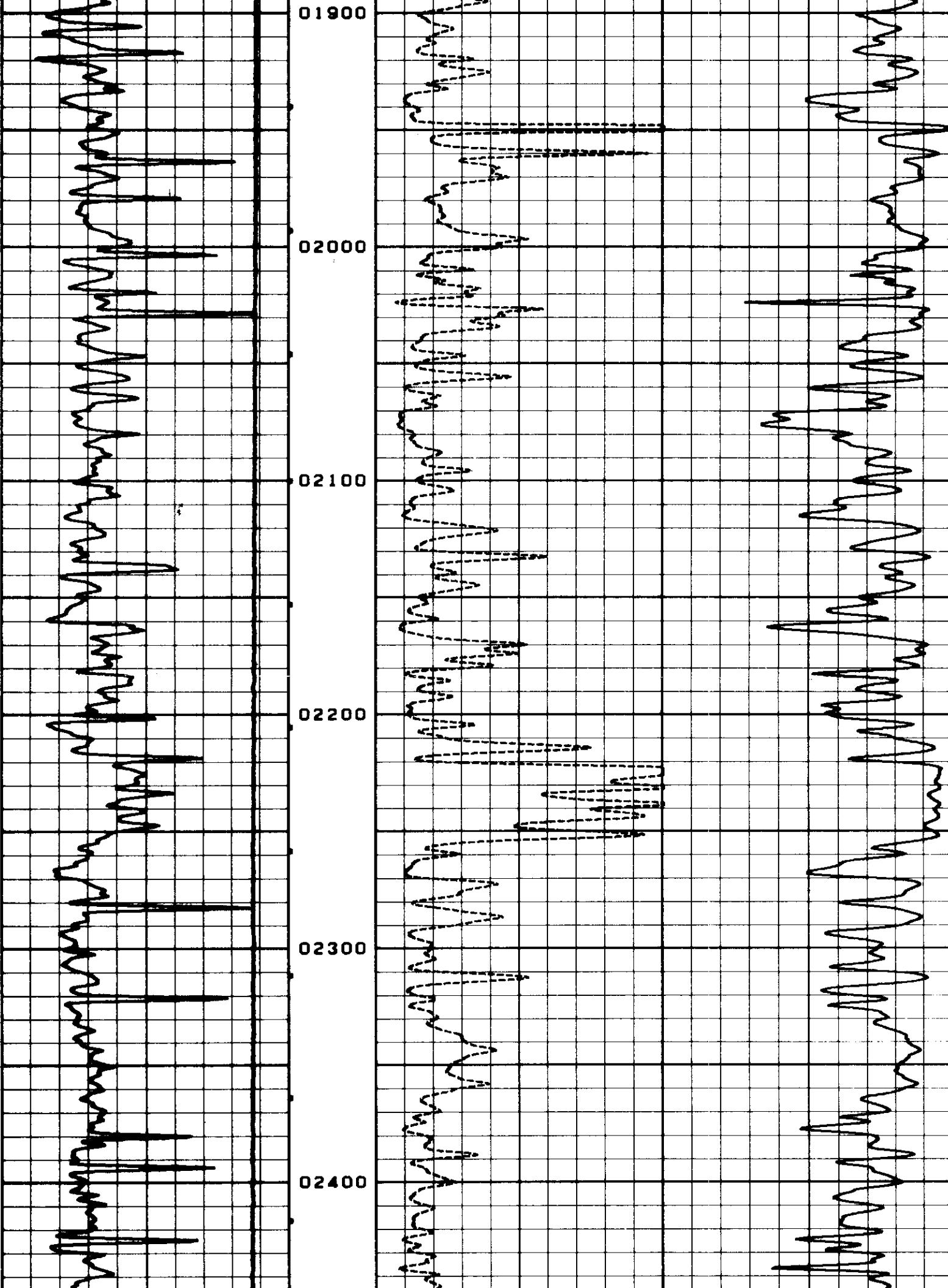
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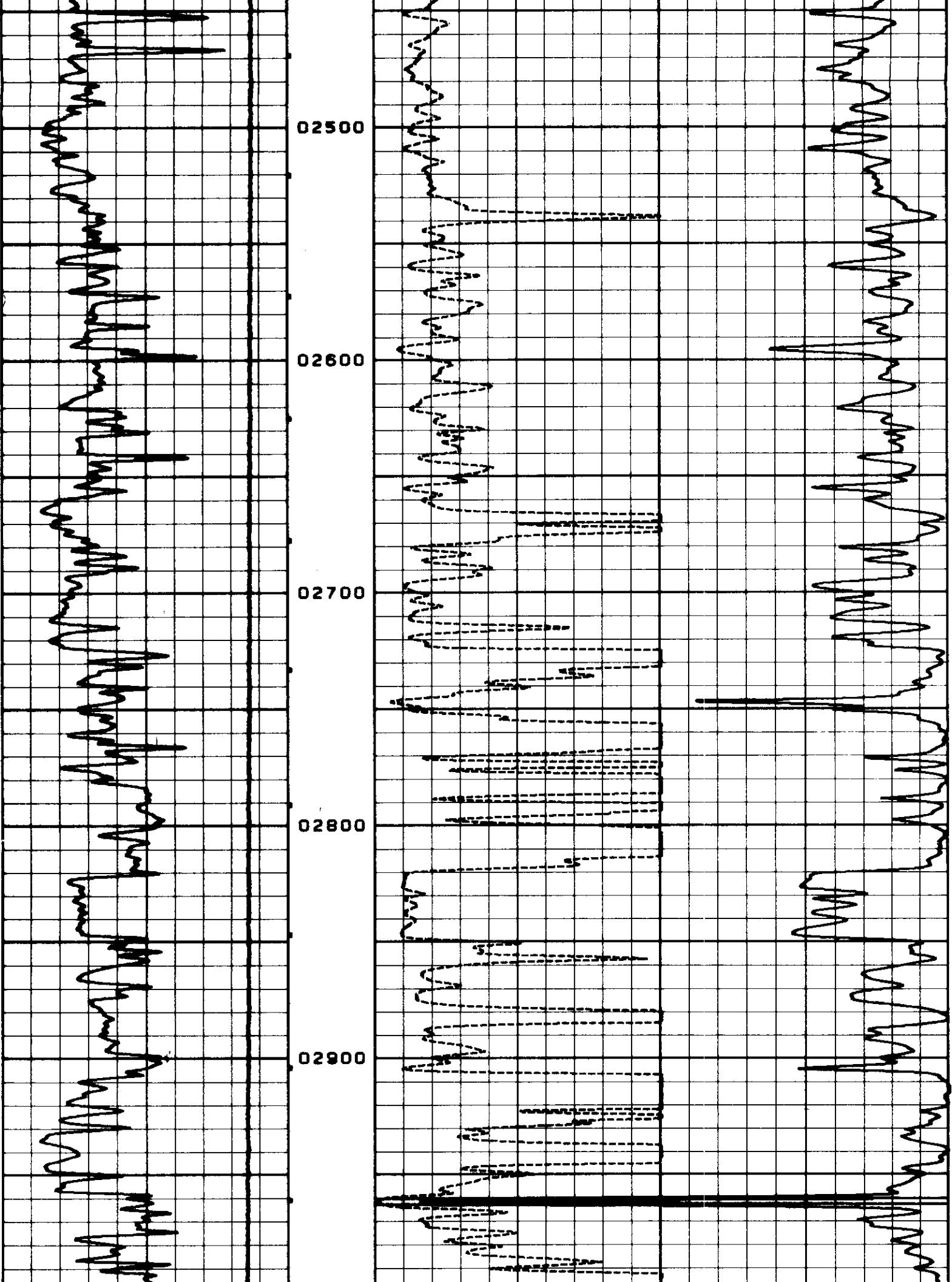
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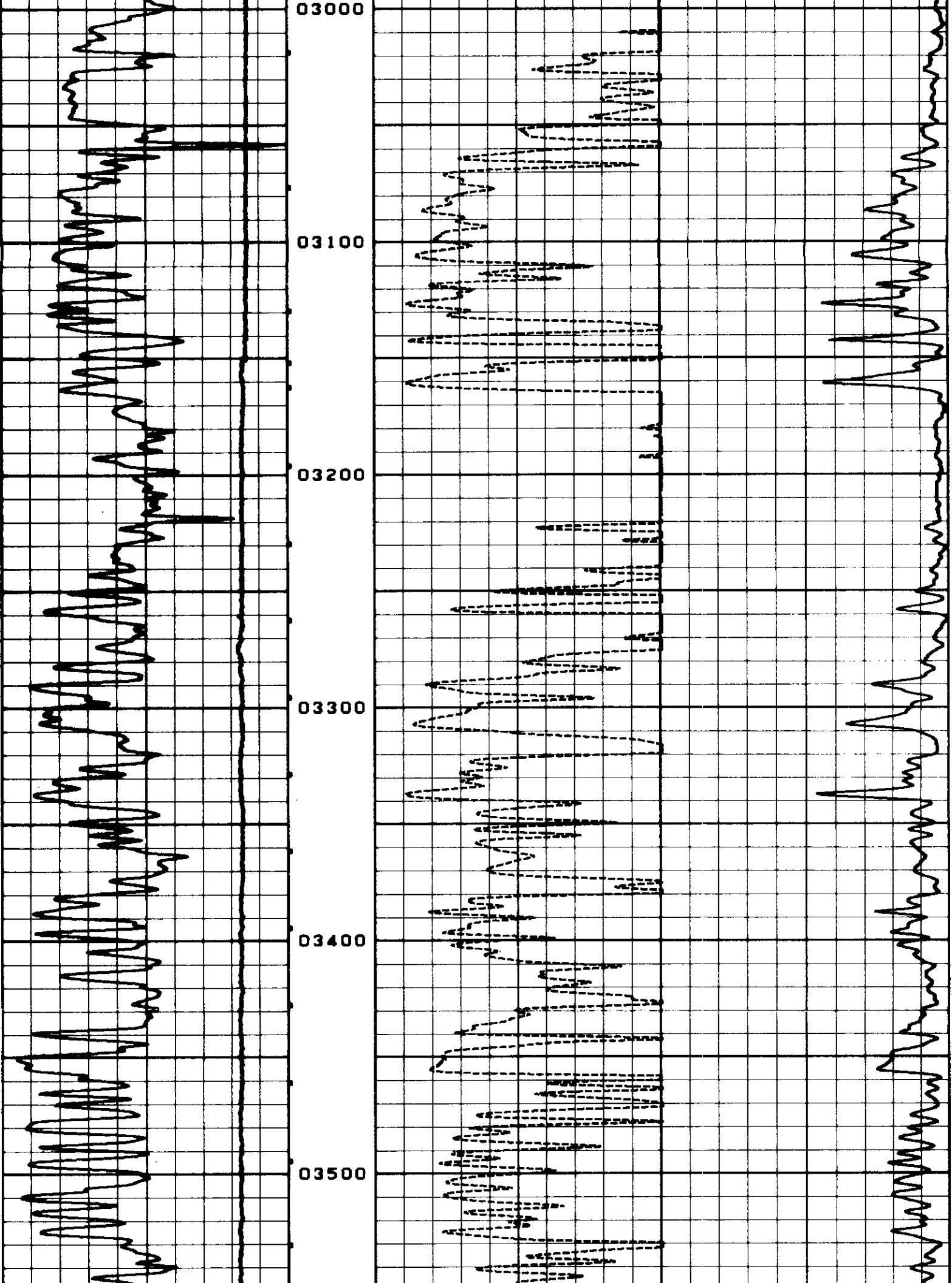


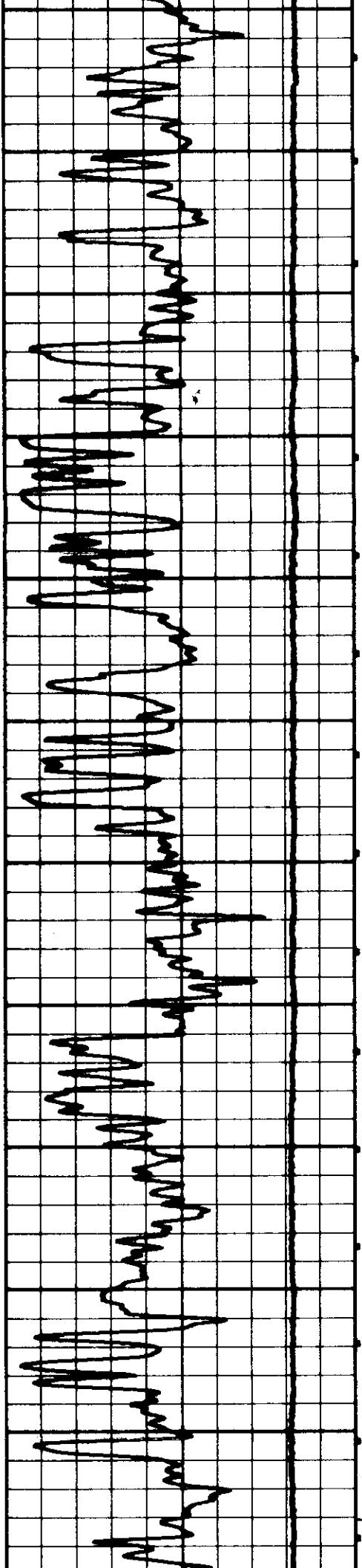




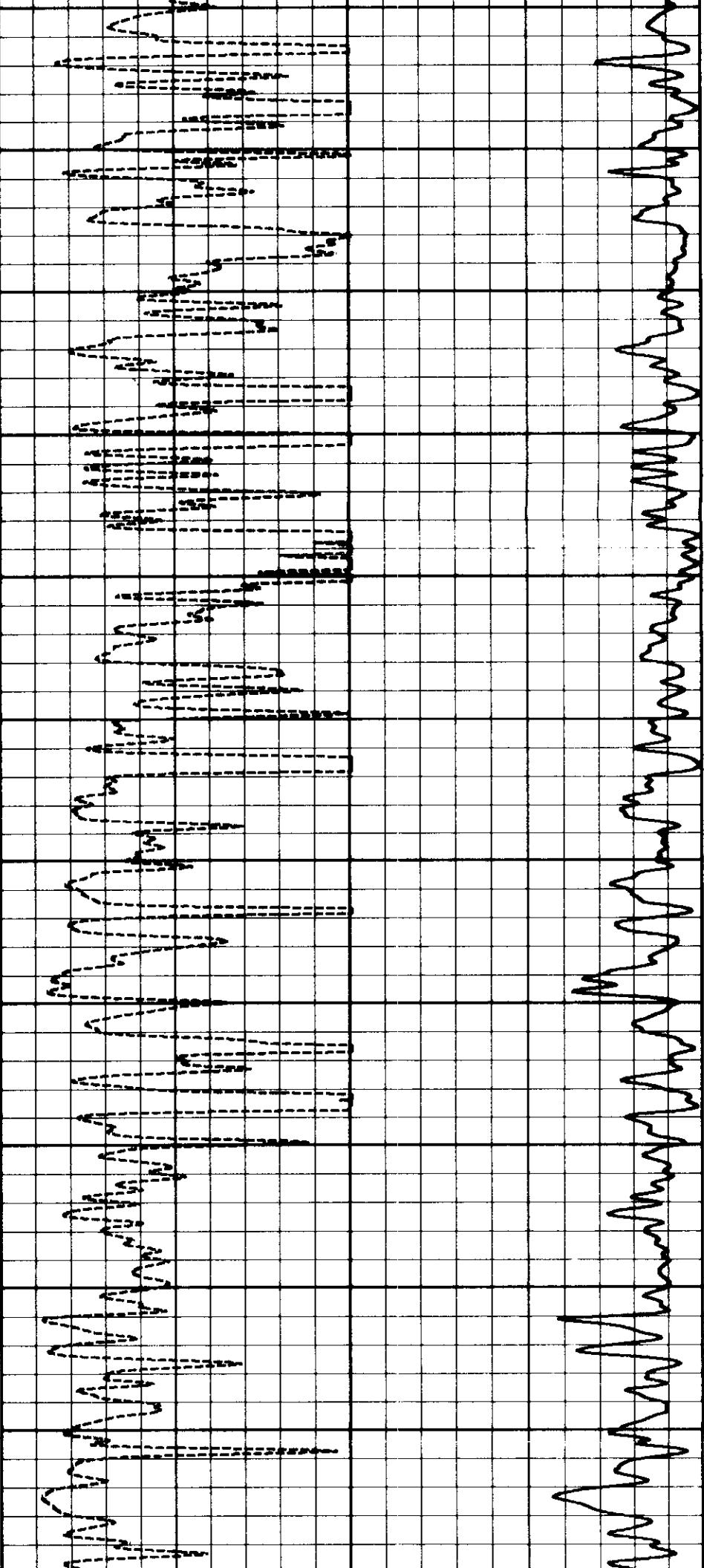


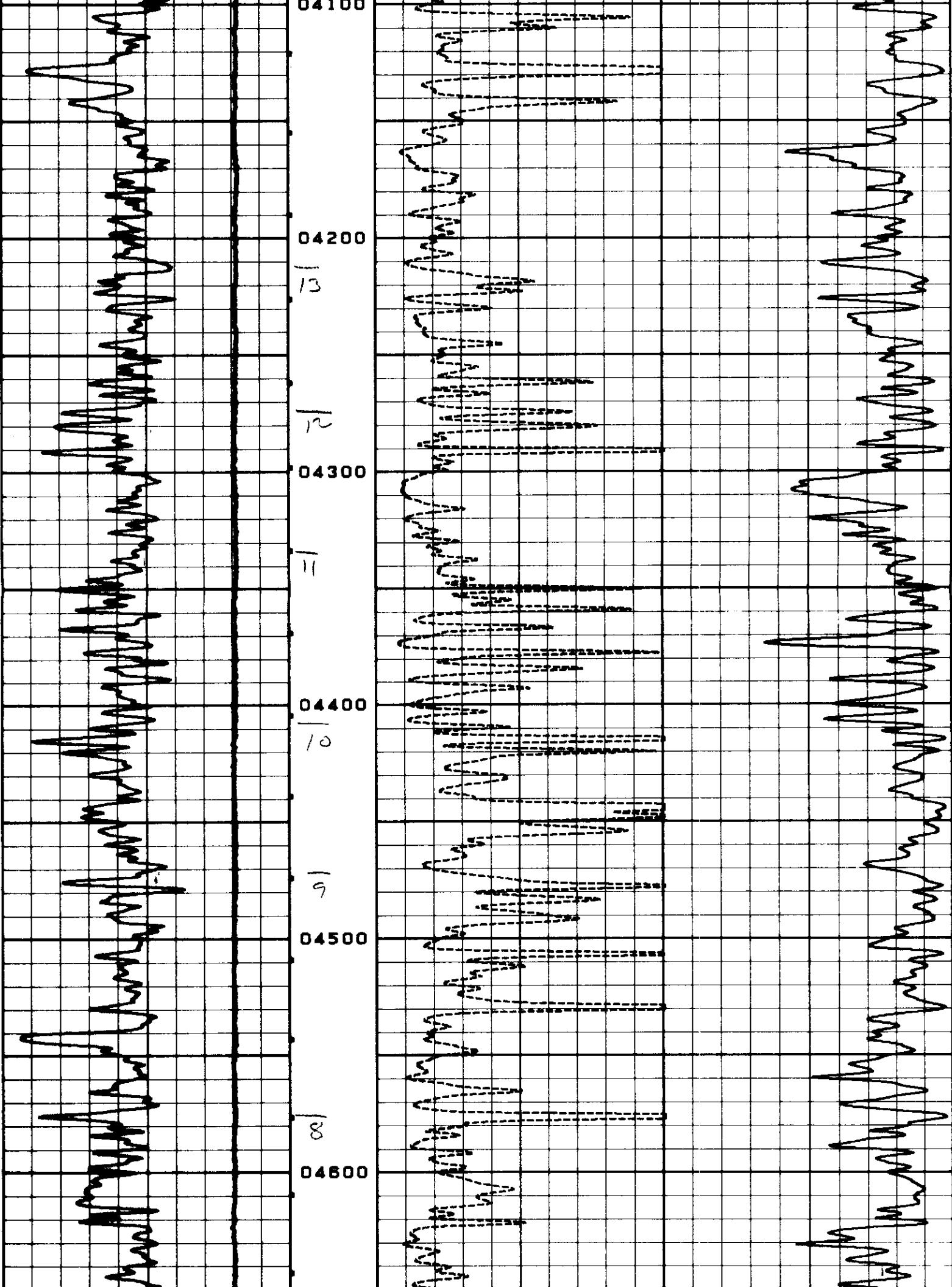


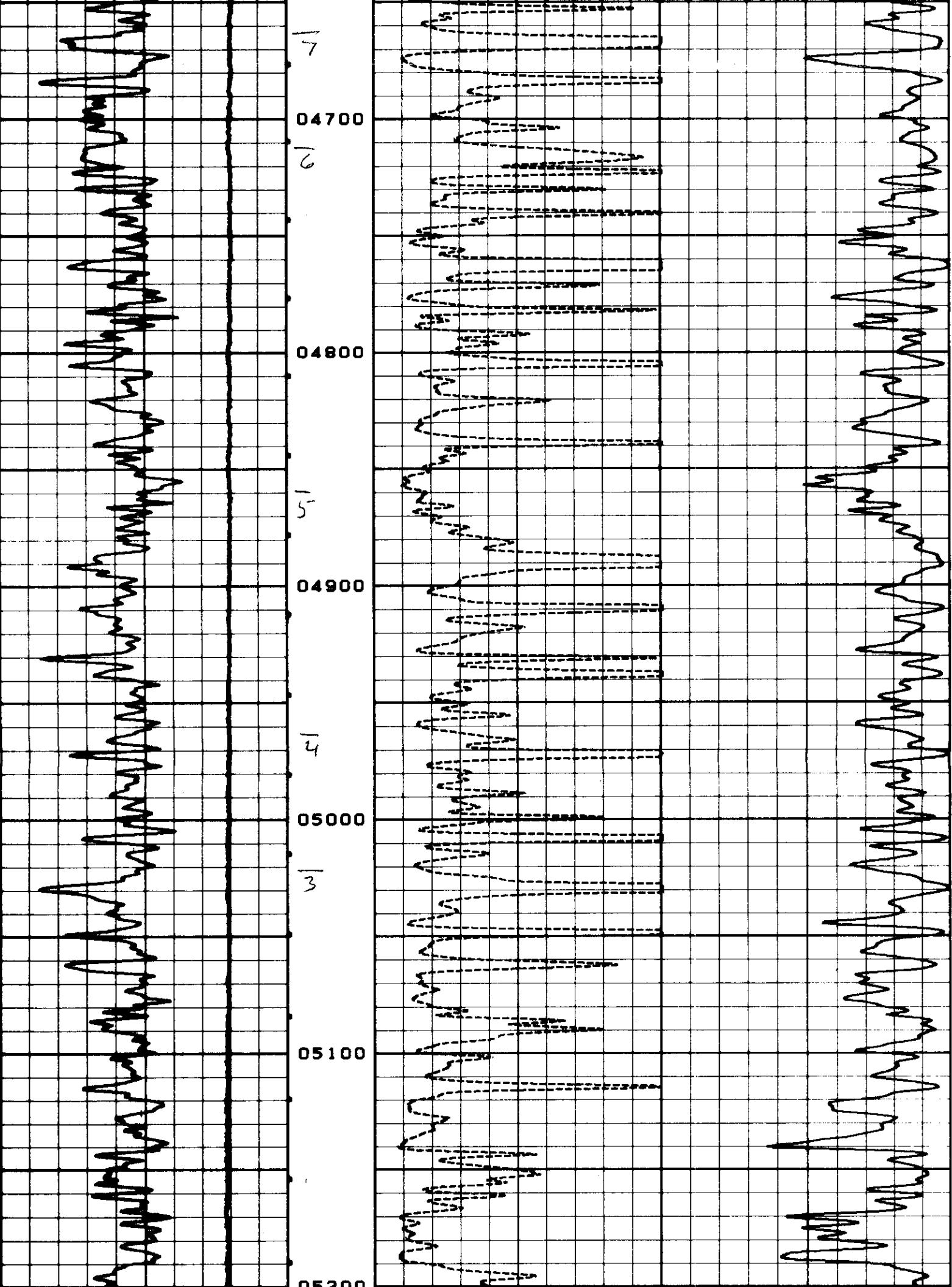


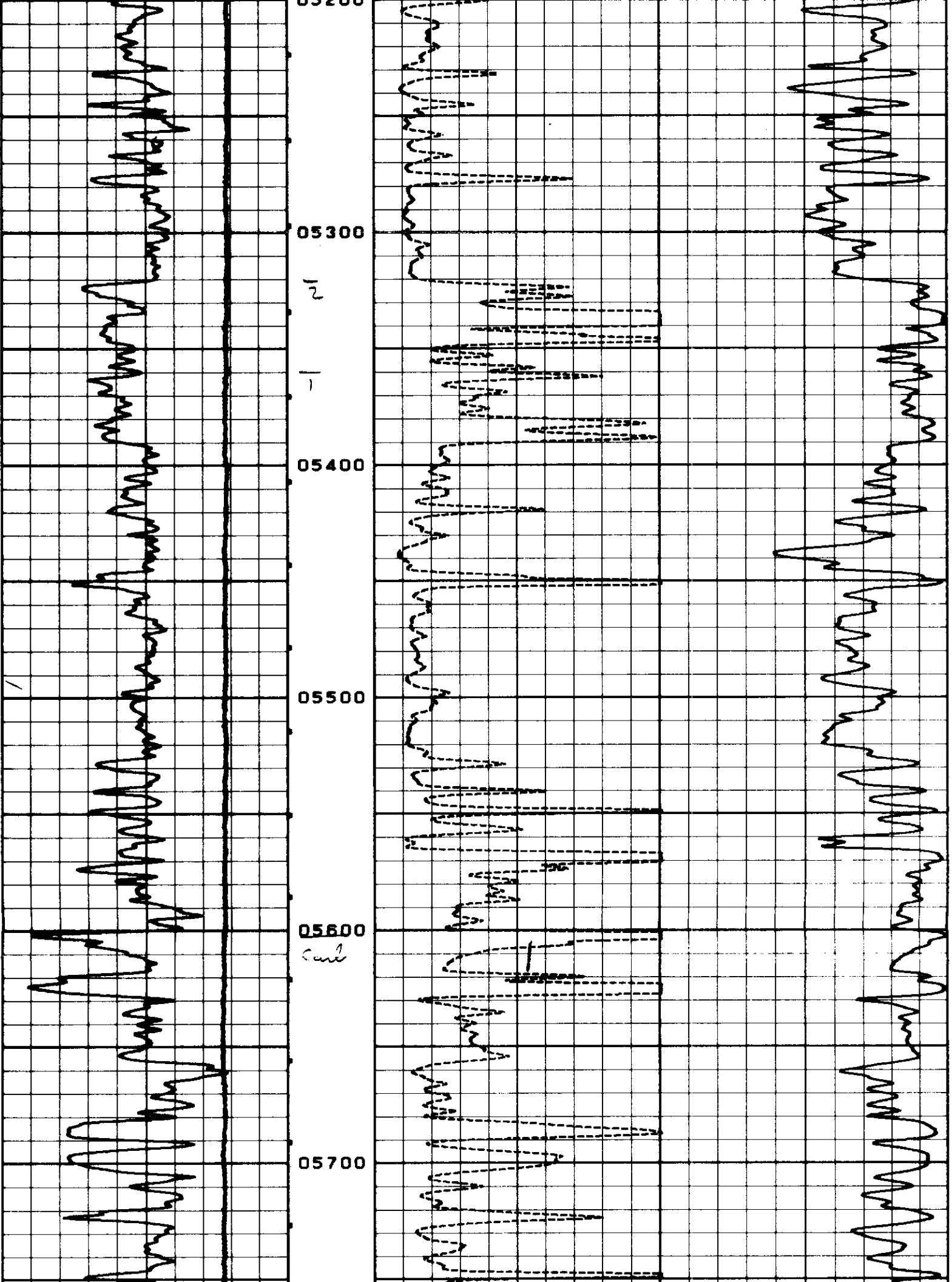


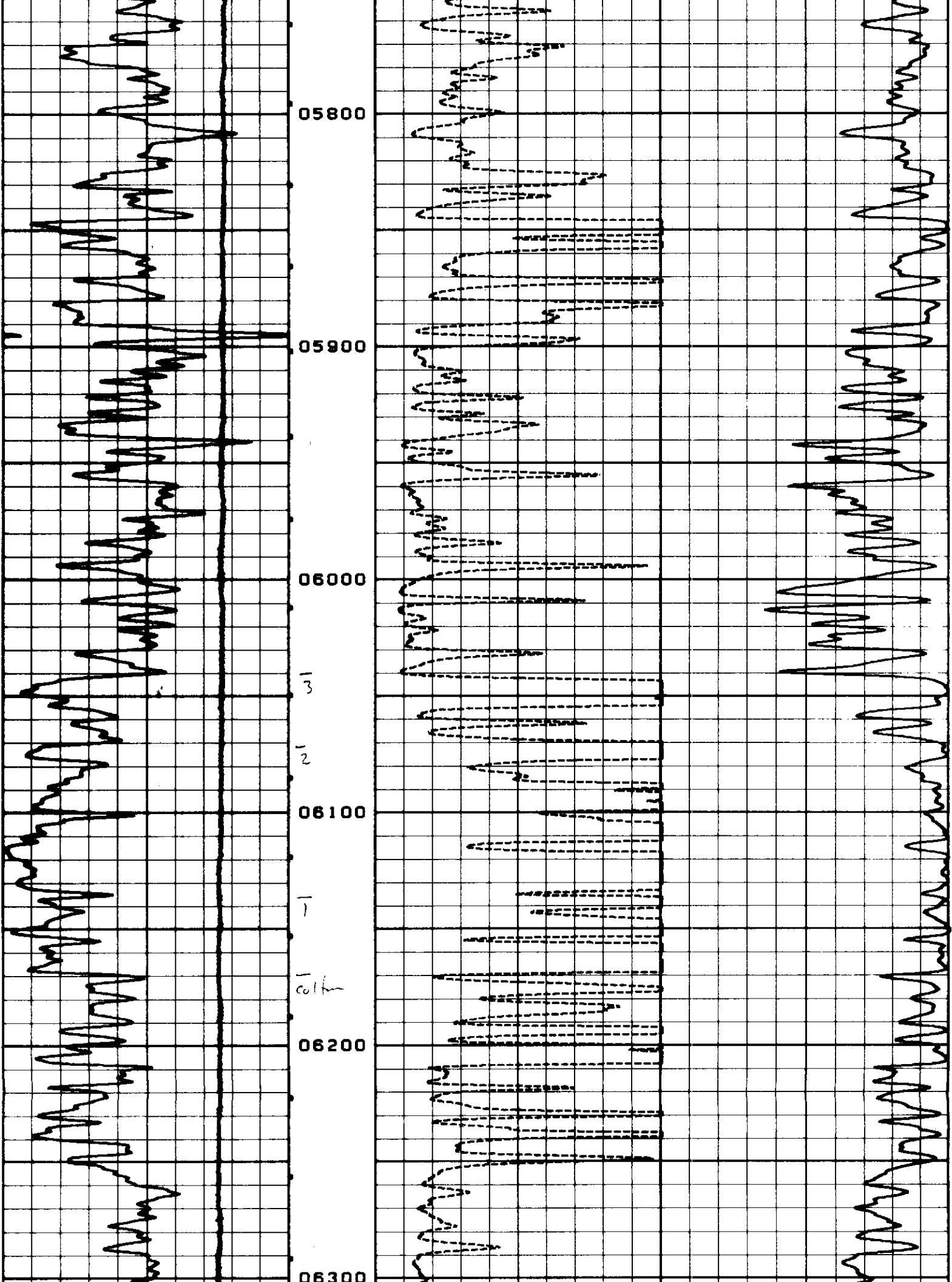
03600
18
03700
17
03800
16
03900
15
04000
14

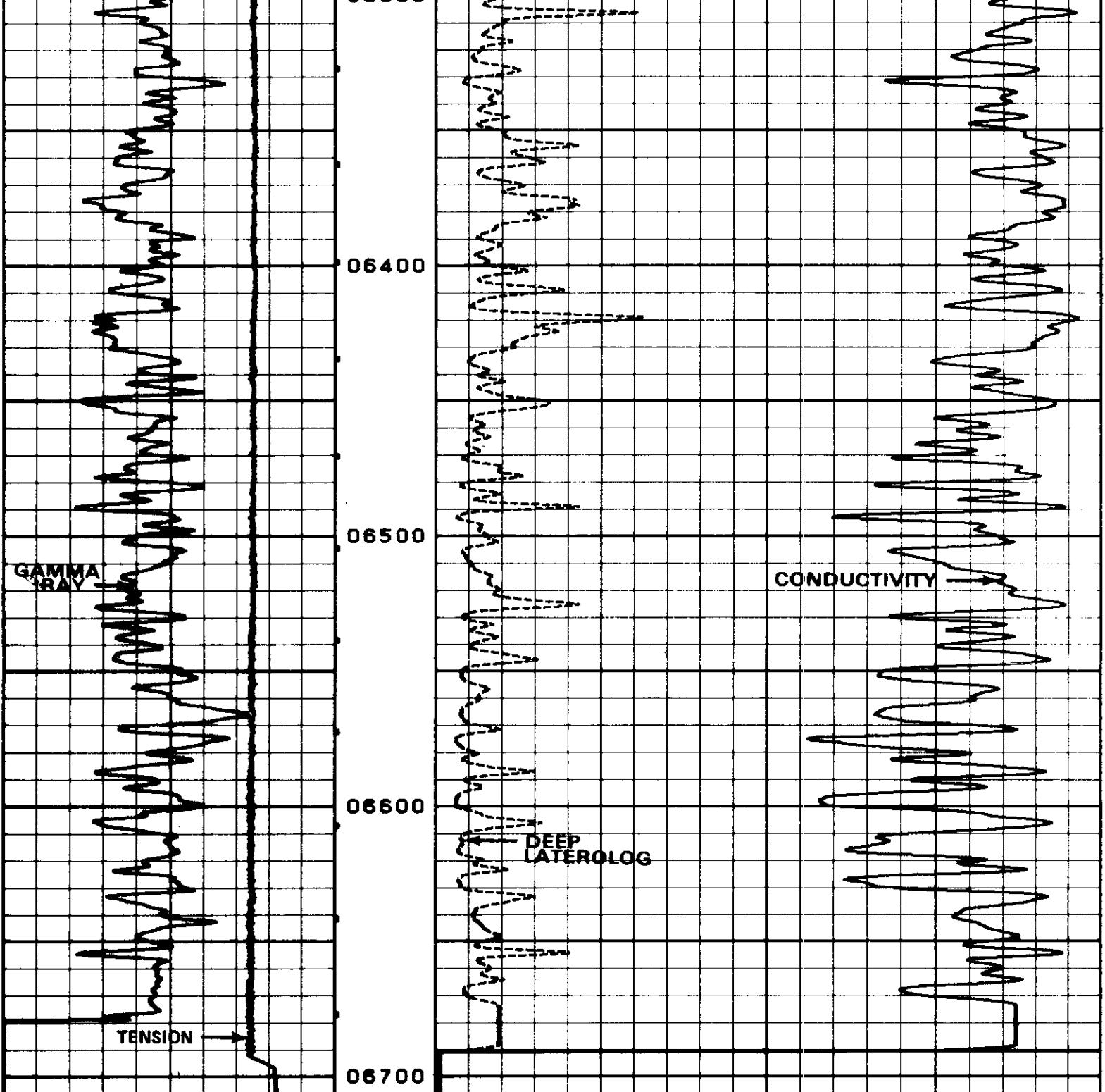












0	GR API	200	400	C (ILD)	MMHOS	0
0	R (ILD) Ω-M	100	-----			

04-14-84

17:38

6710.0

259980

0042-31

0

0001-19

3

04-14-84

20:13

354.5

259980

0093-65

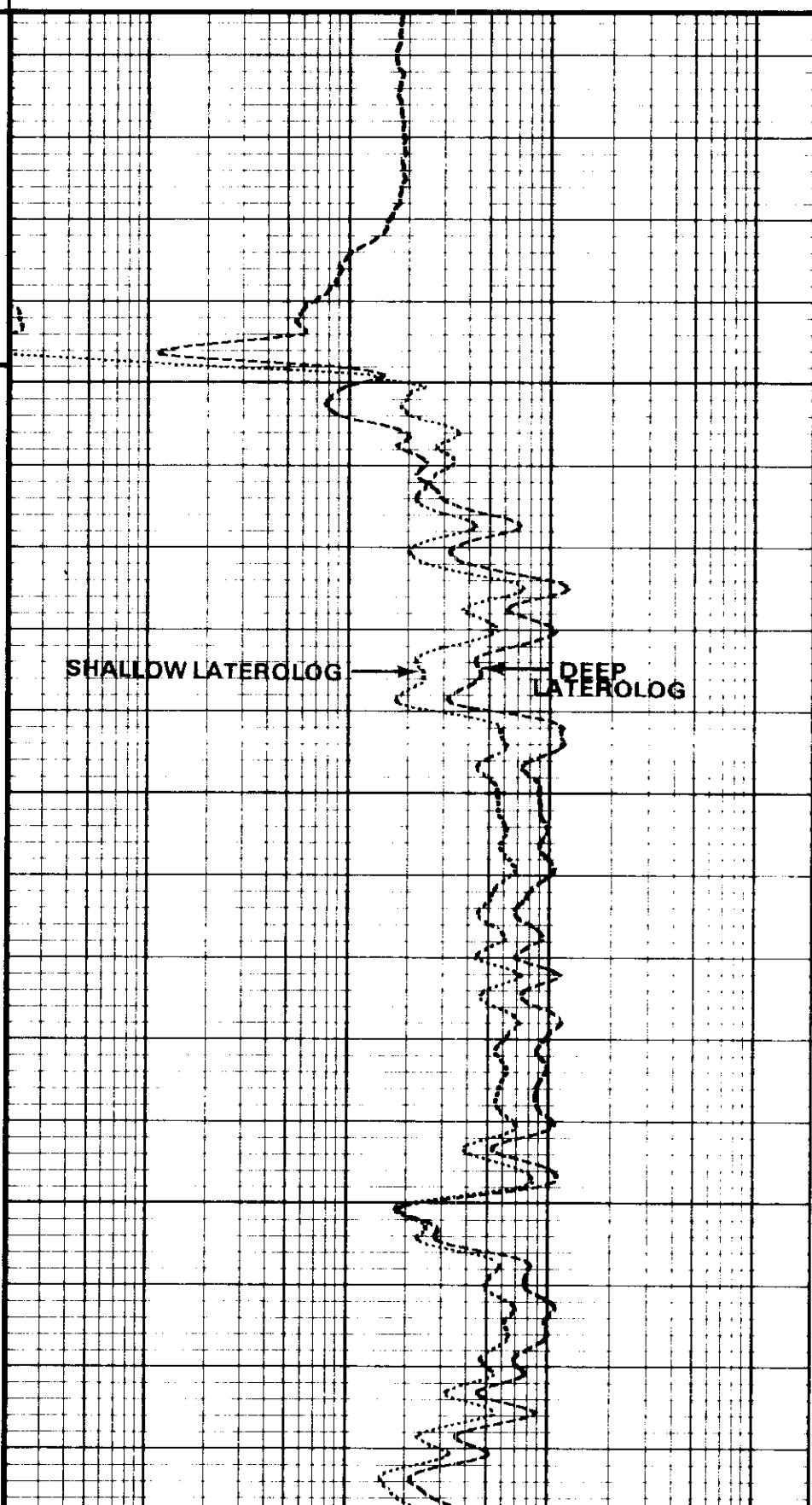
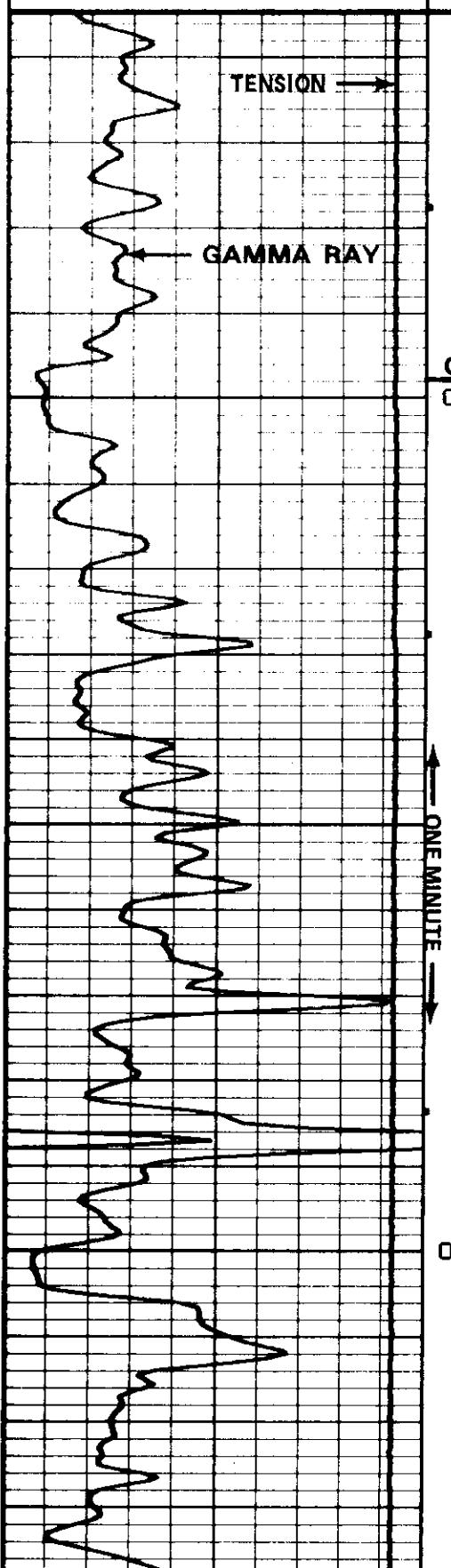
0

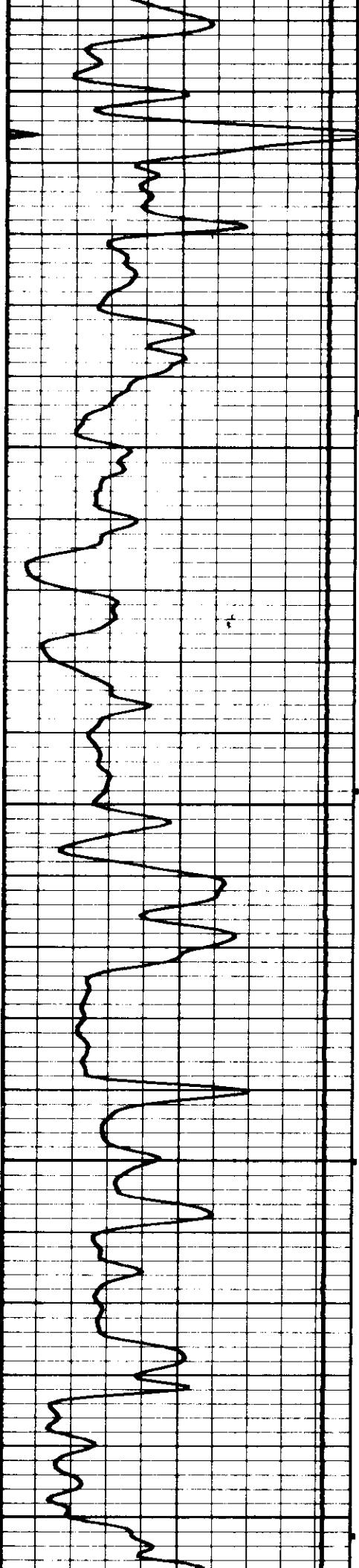
0001-13

3

6 CALIPER X 16
0 GR API 200

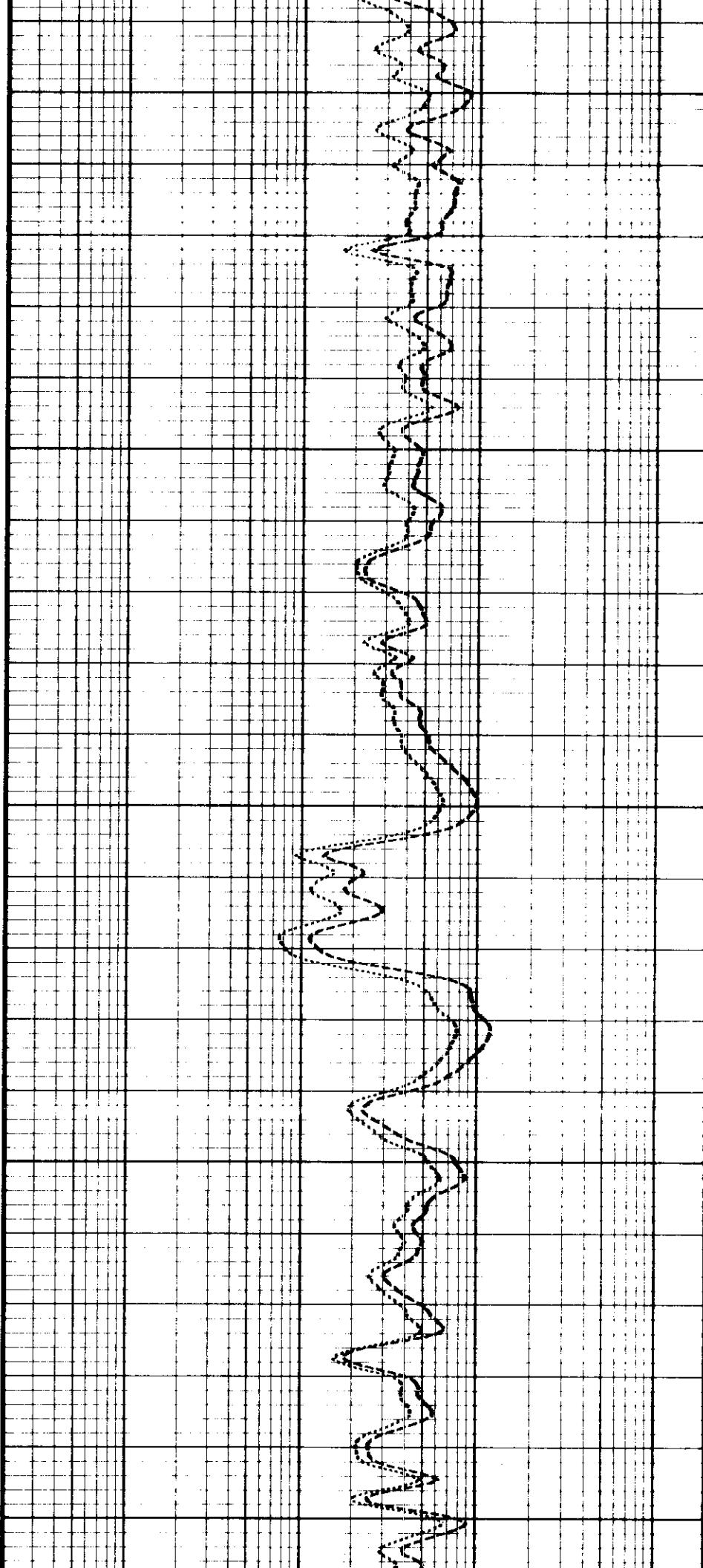
0.2 R (RXO) Ω-M 2000
0.2 R (LLS) Ω-M 2000
0.2 R (LLD) Ω-M 2000

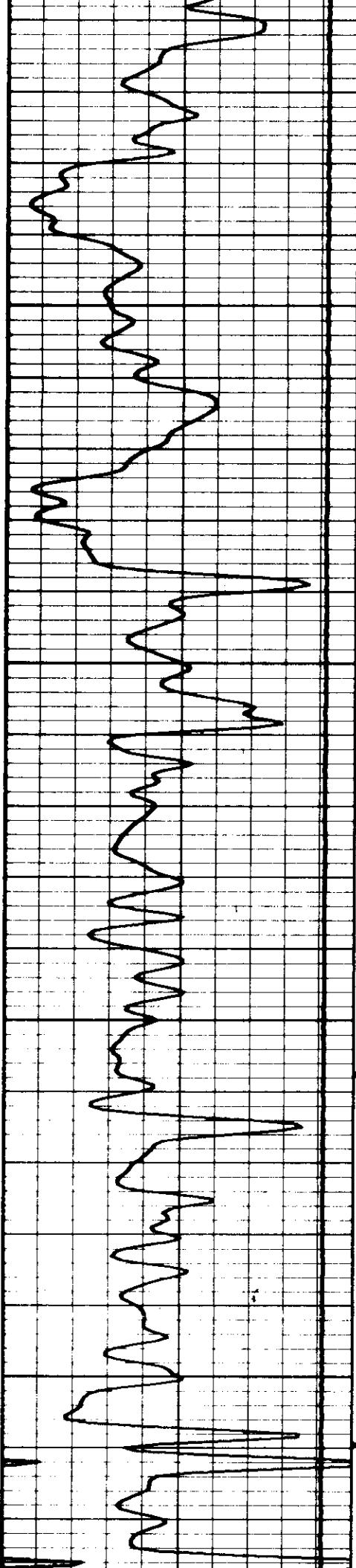




00600

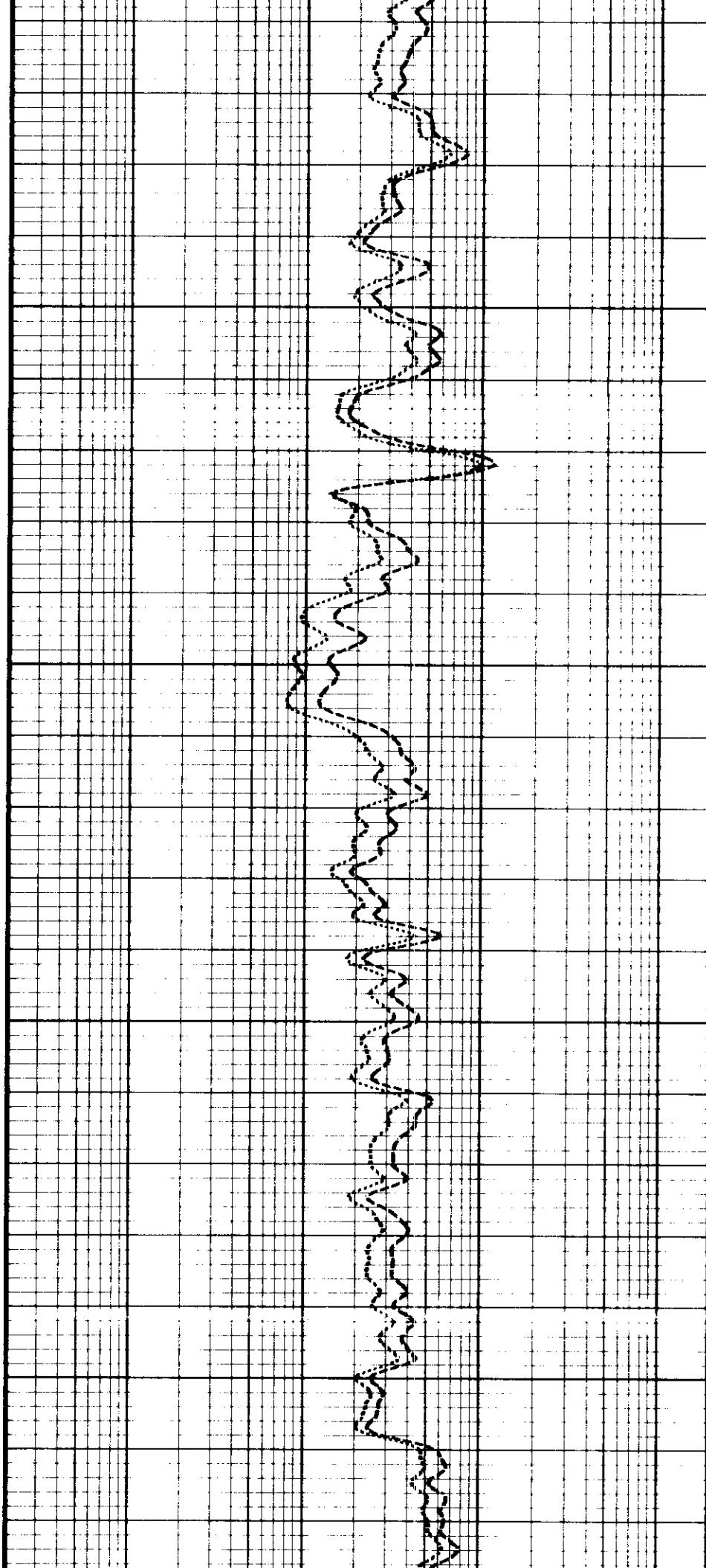
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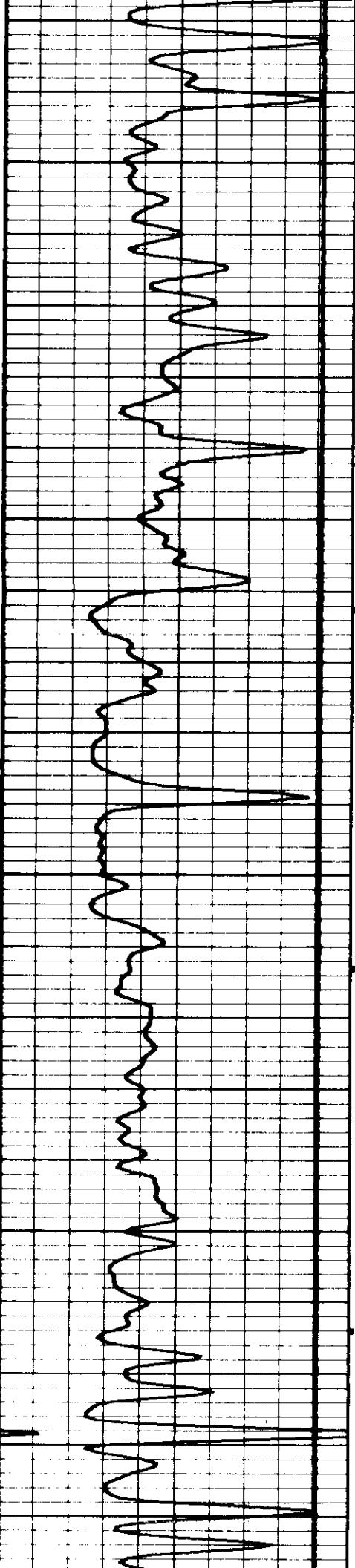




00800

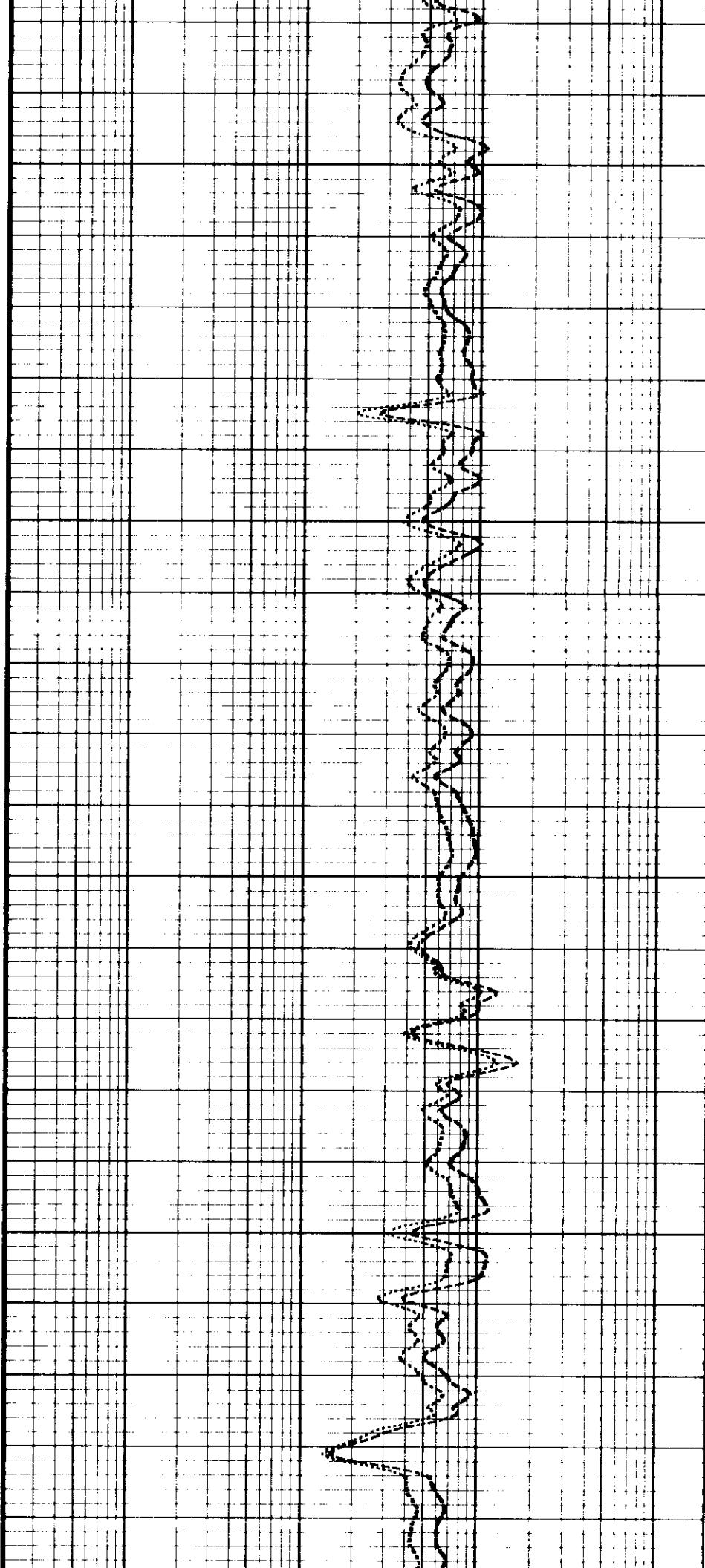
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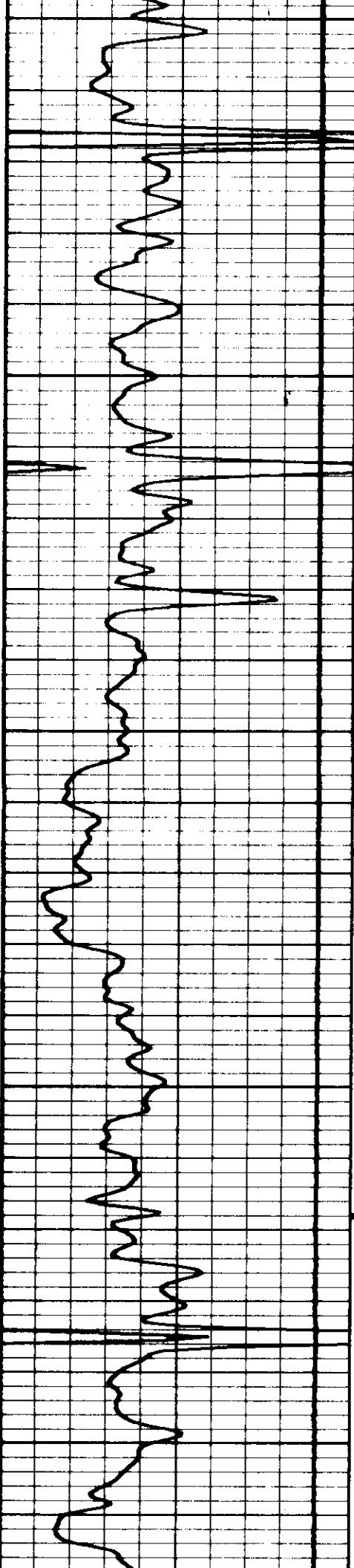


01000

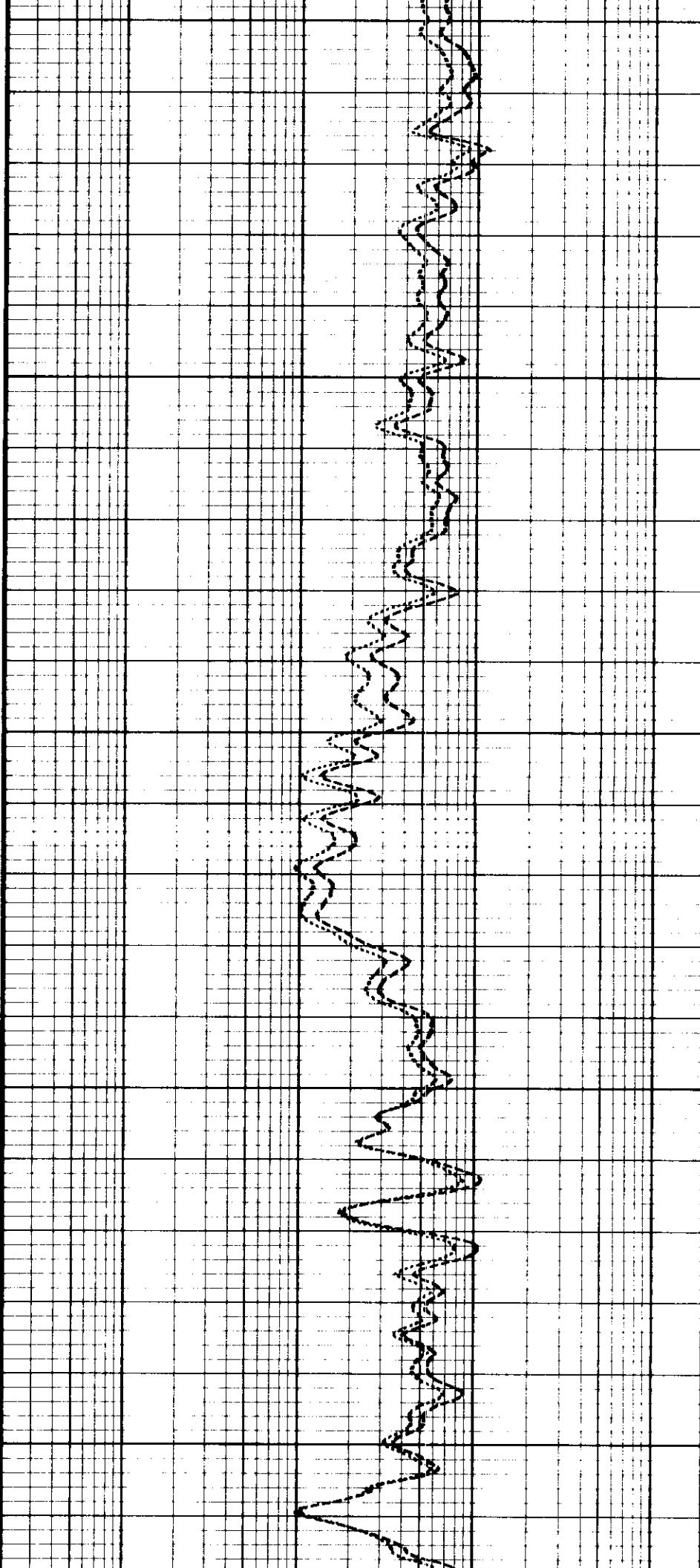
01100



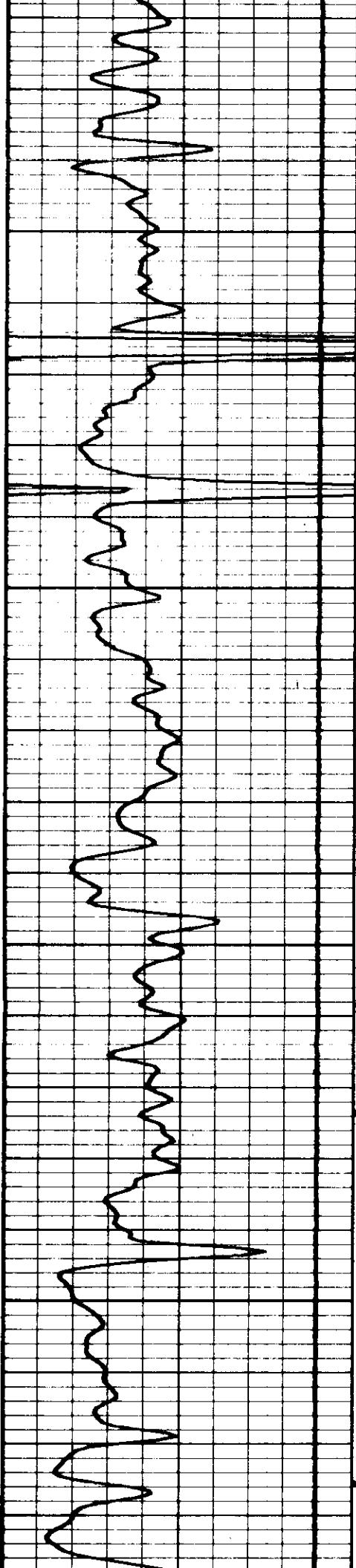
01200



01300

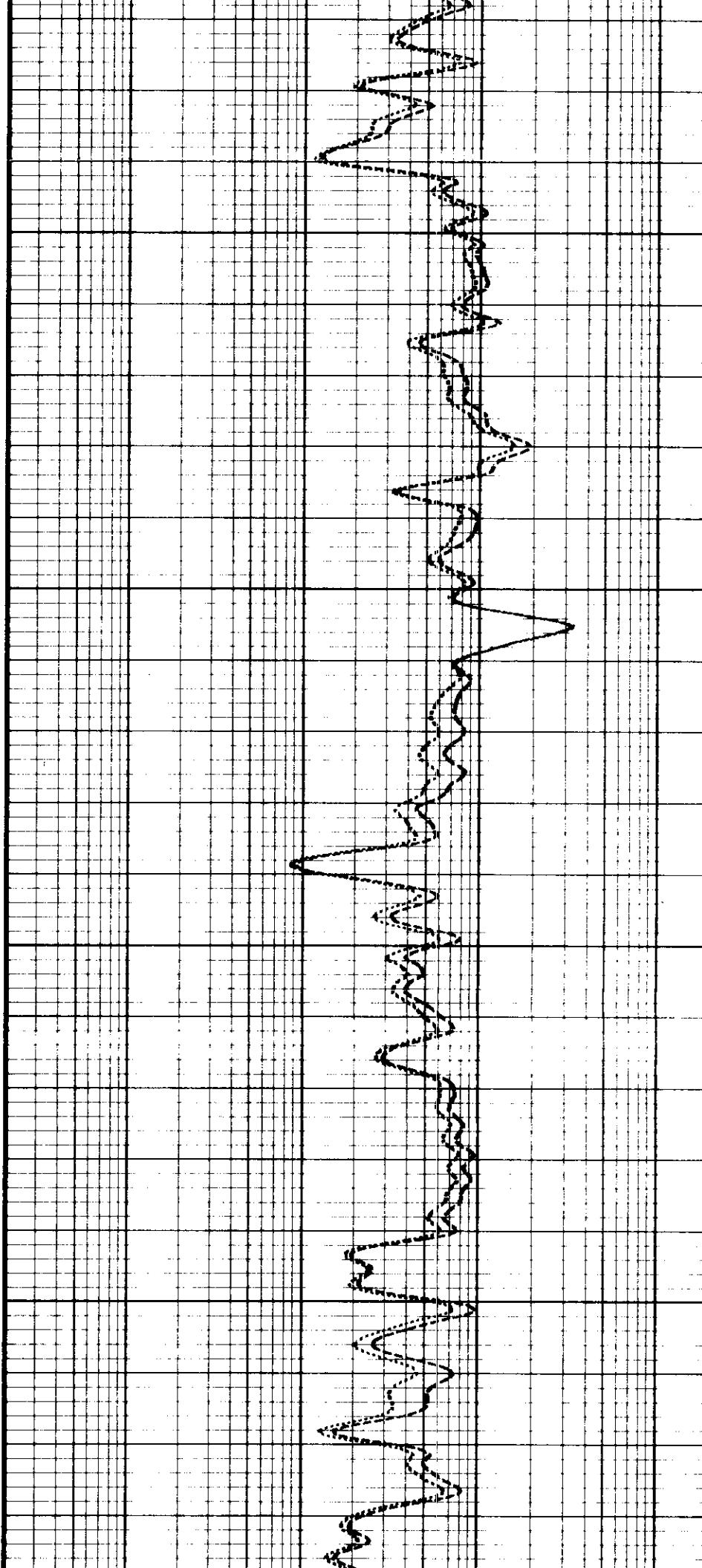


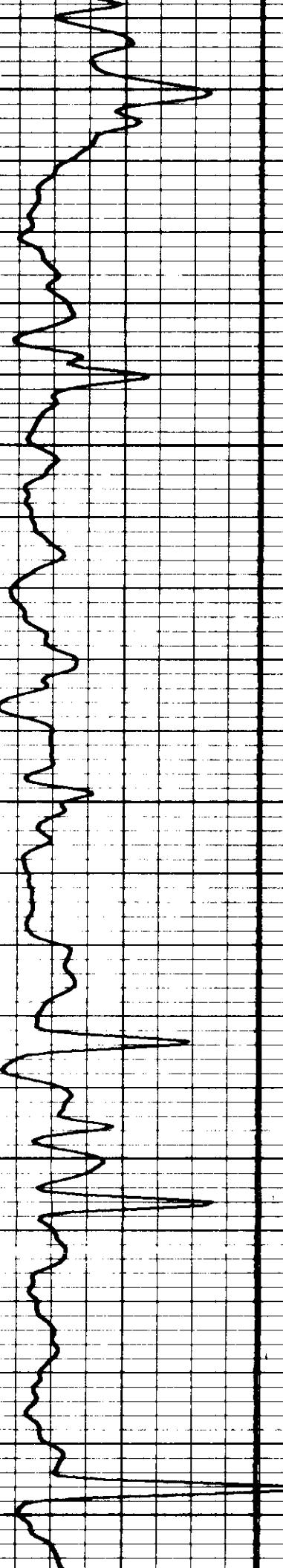
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01500

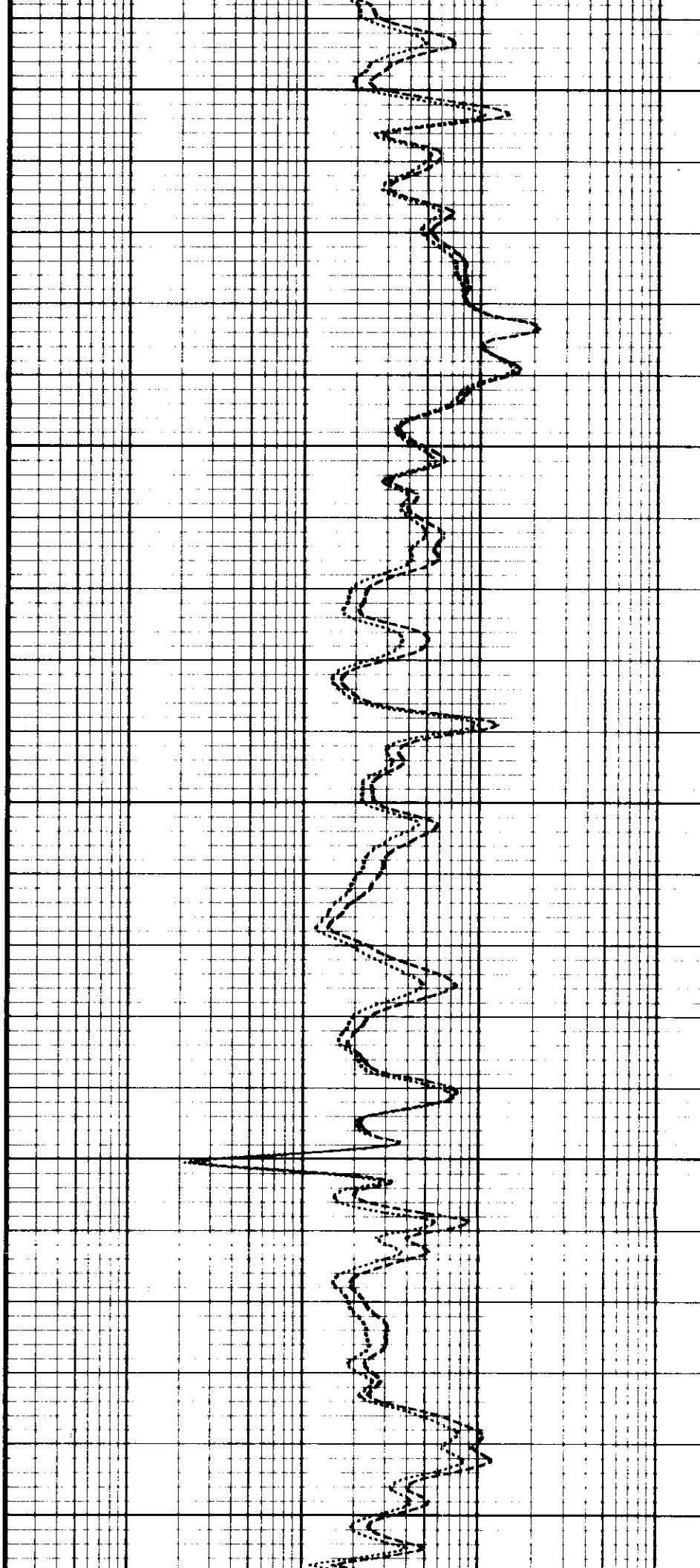
01600





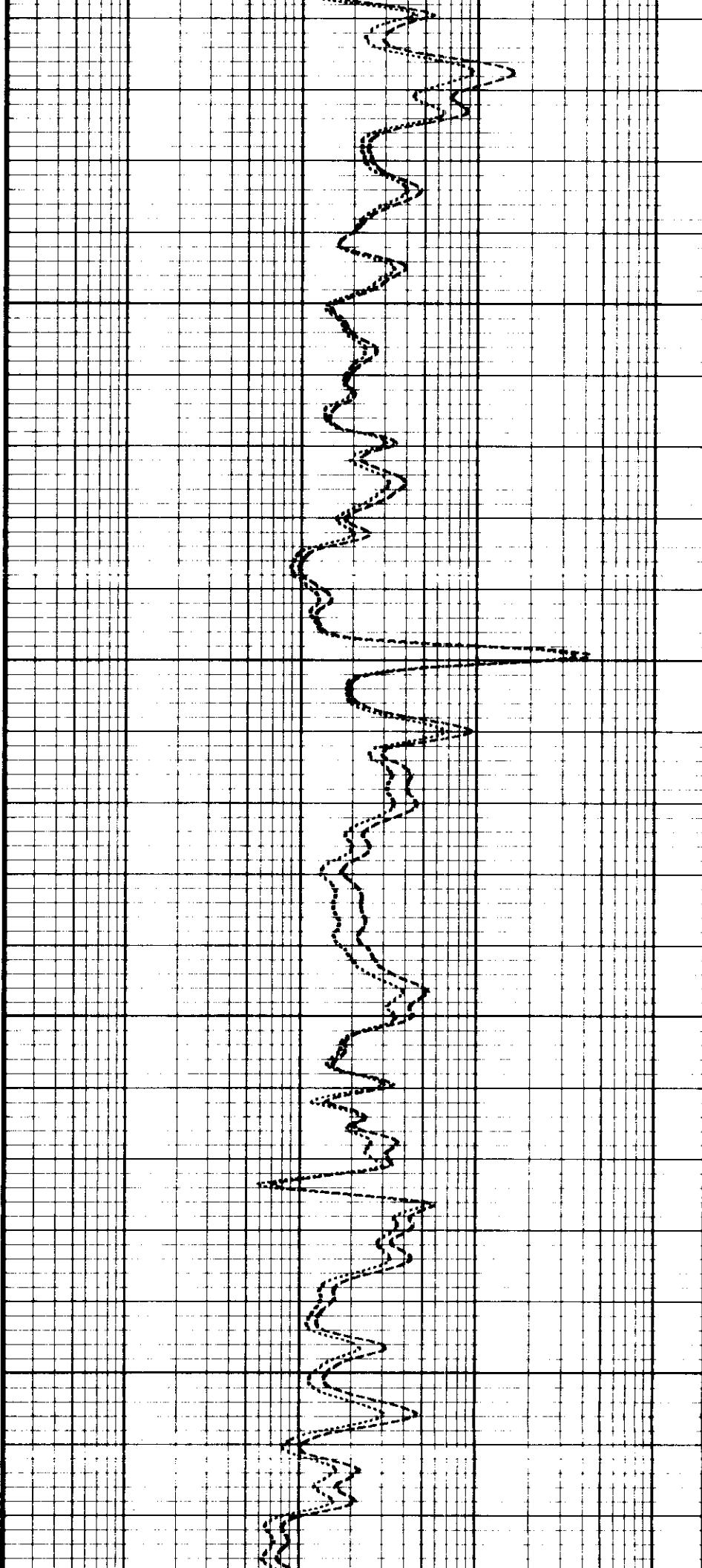
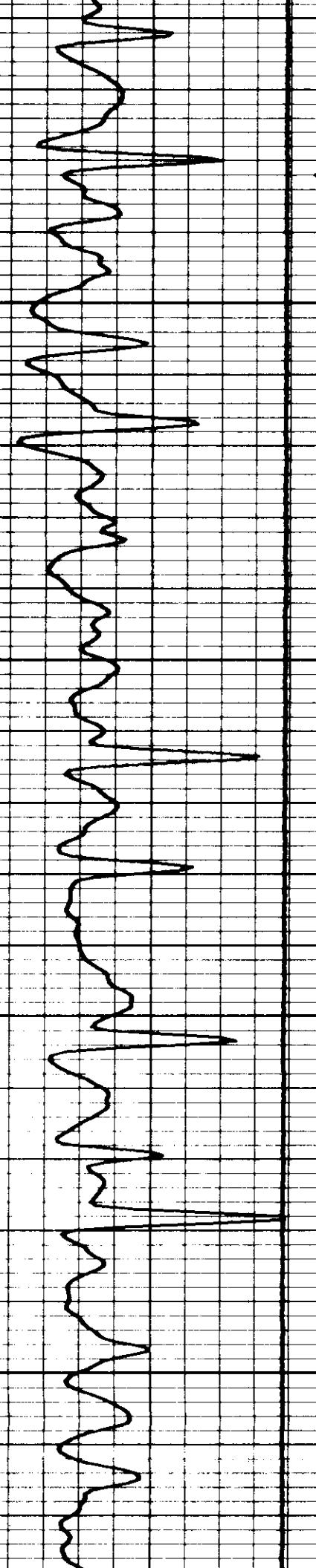
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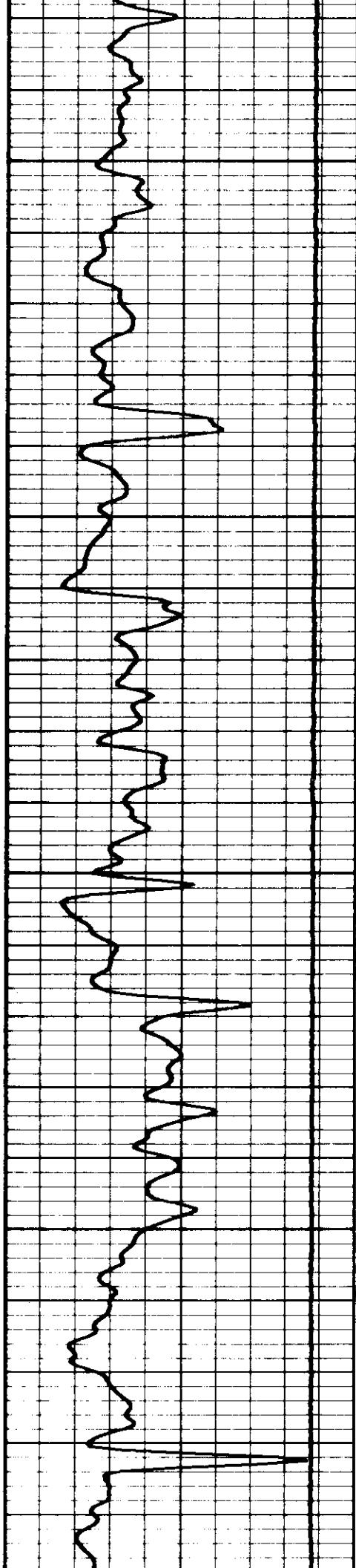
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01900

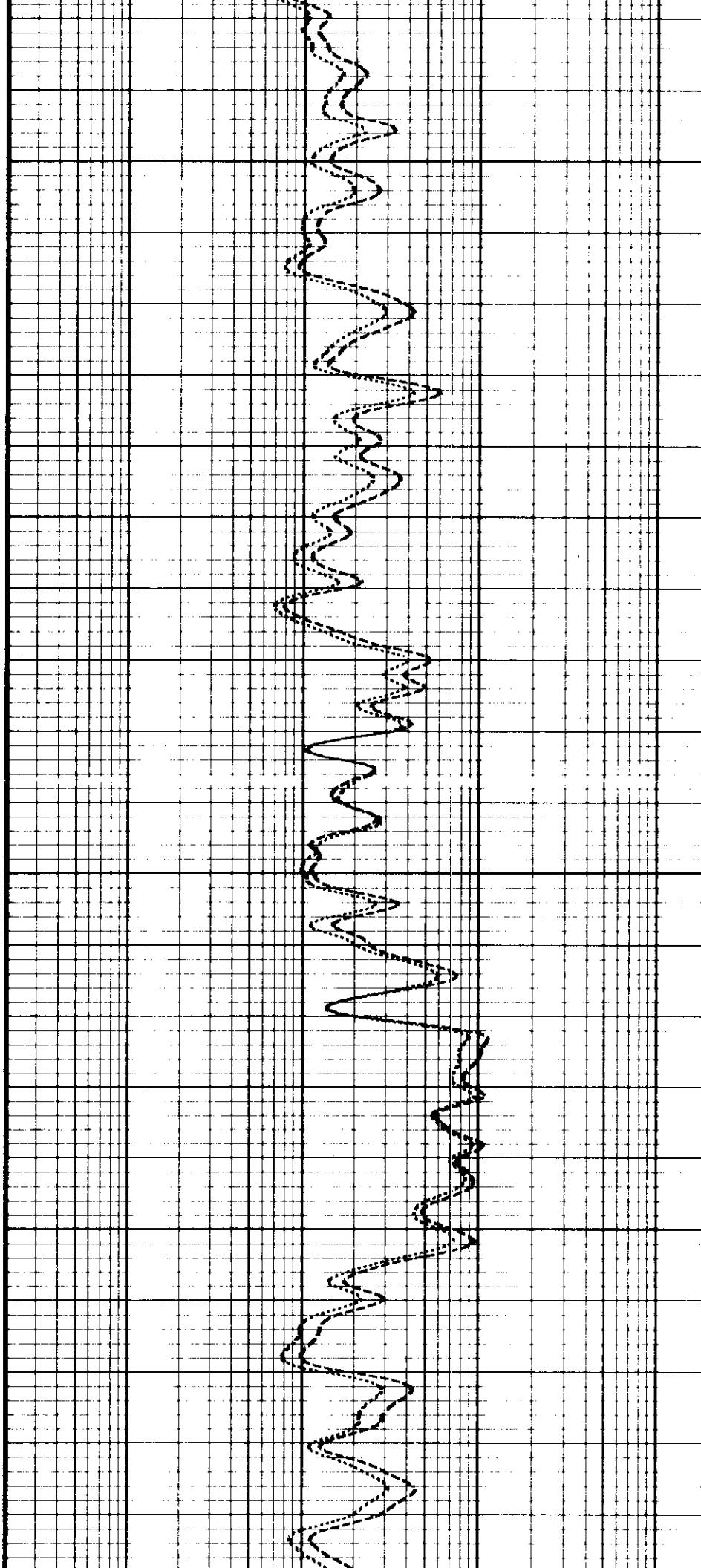
02000





02100

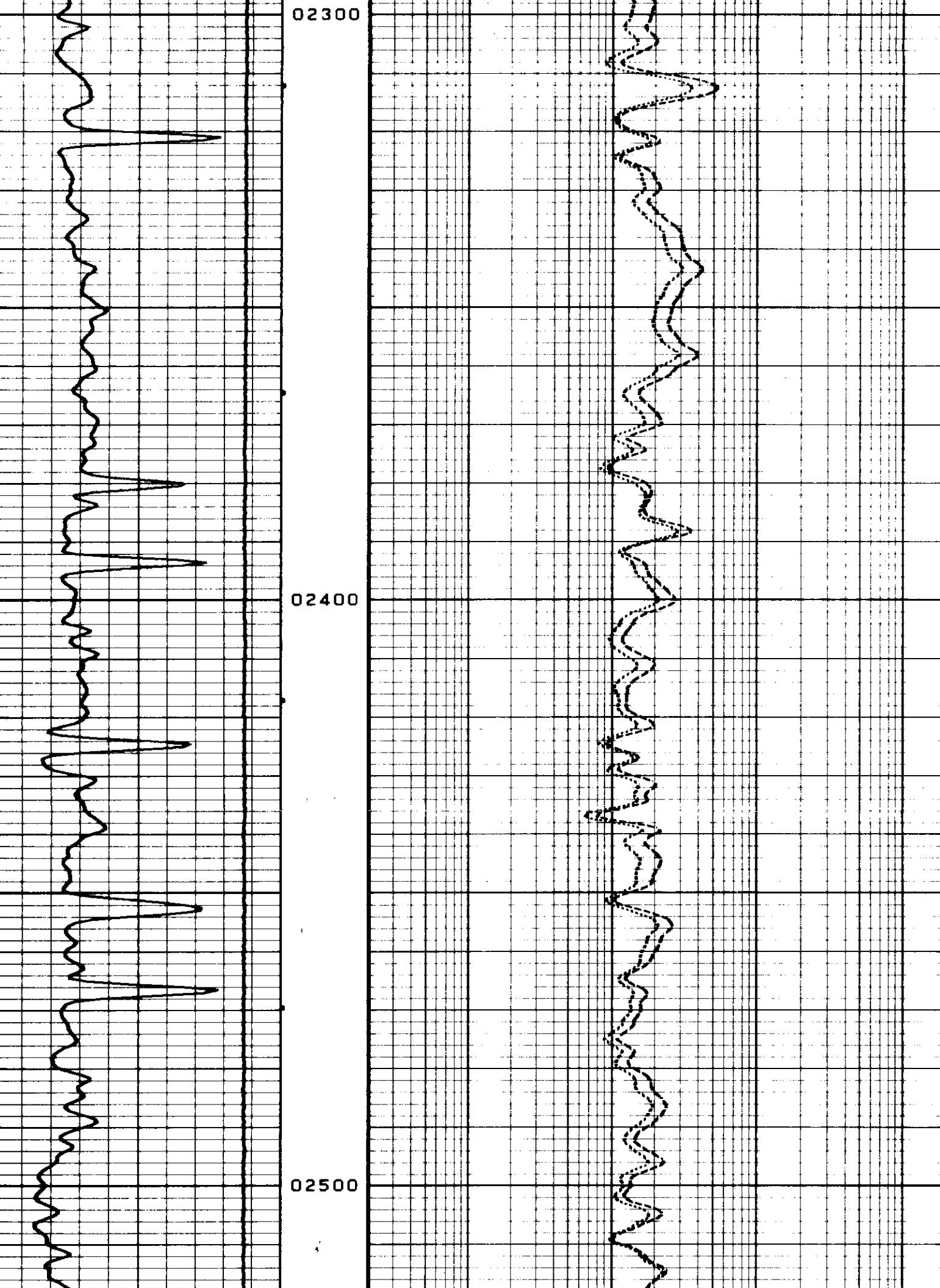
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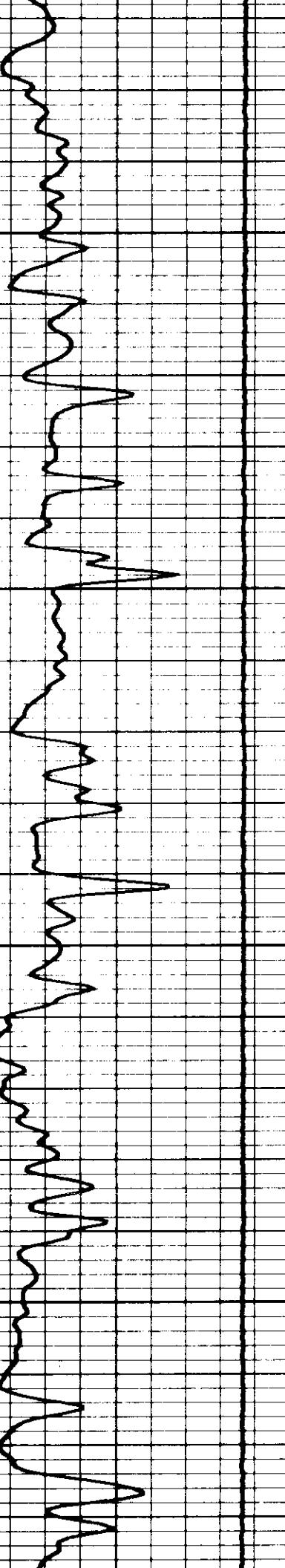


02300

02400

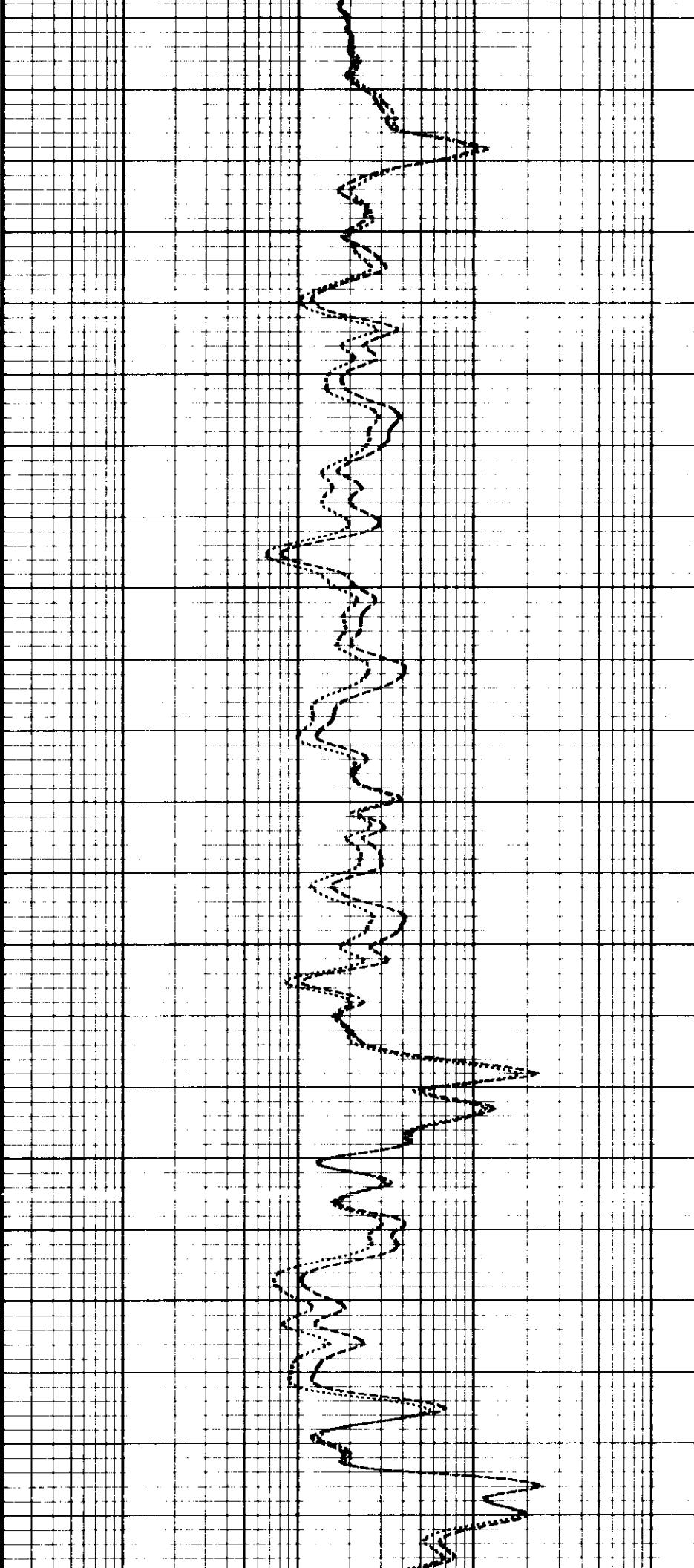
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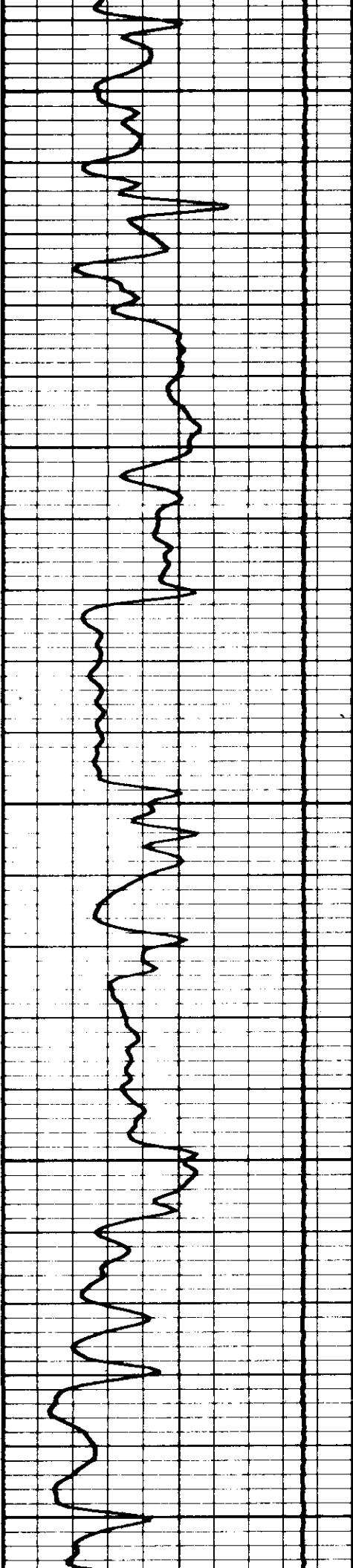




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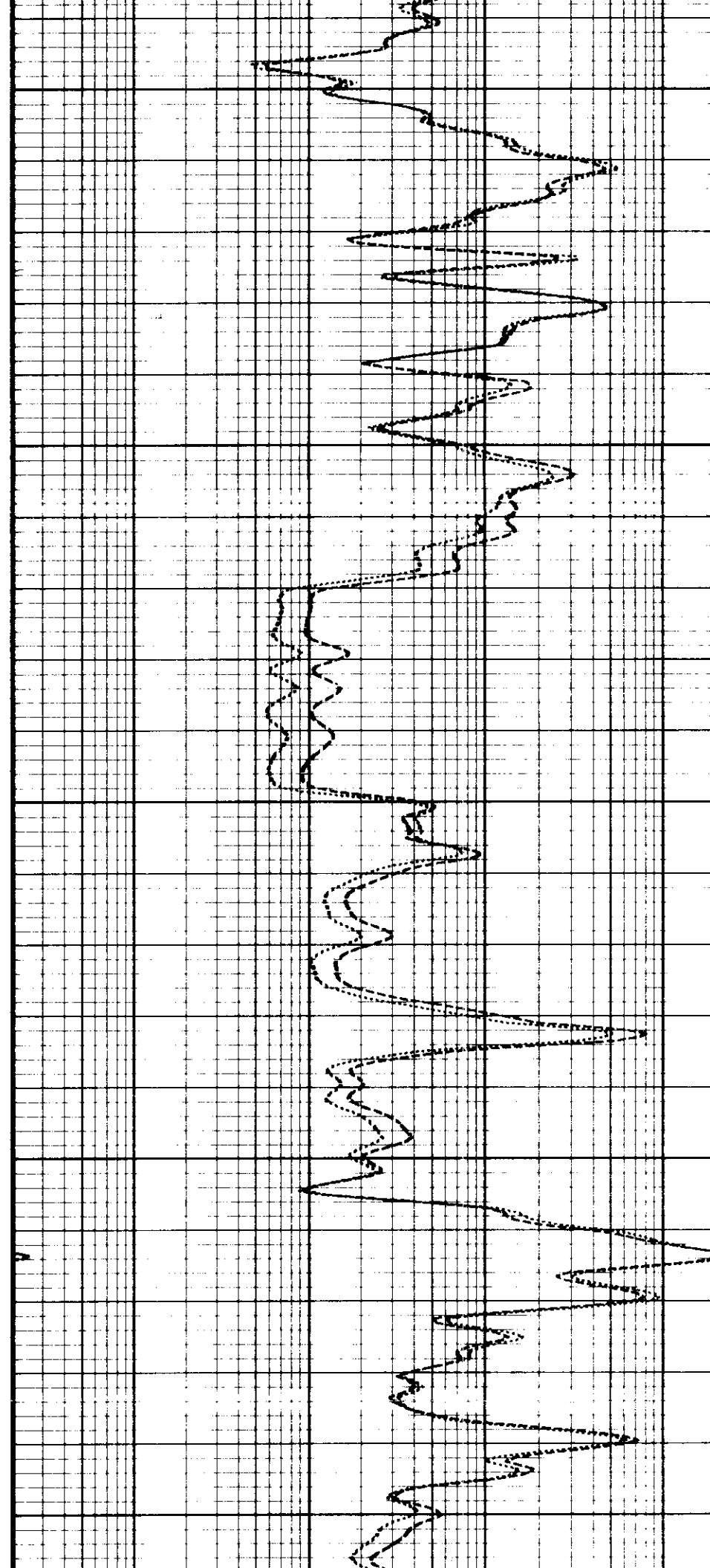
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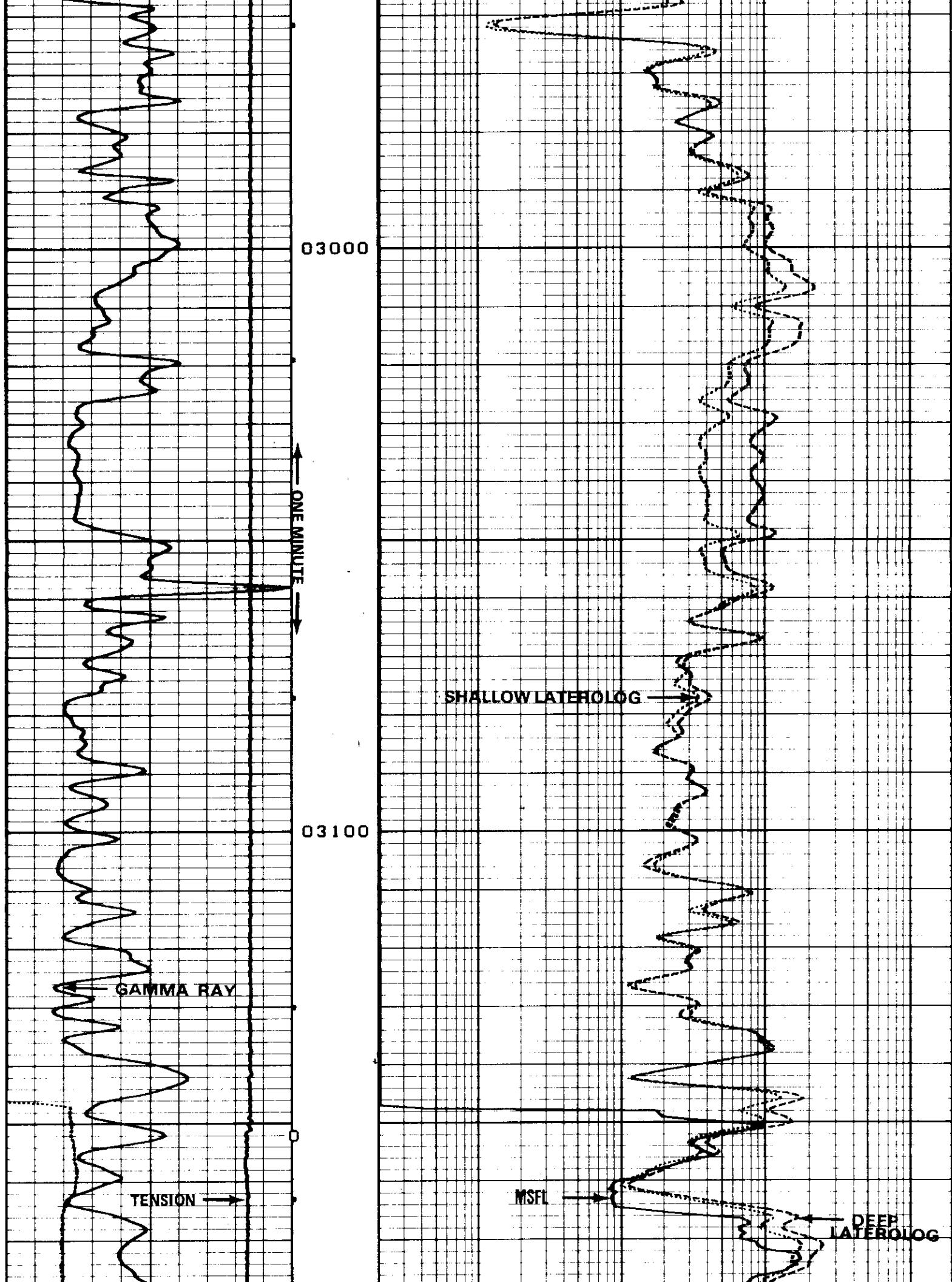




02800

02900

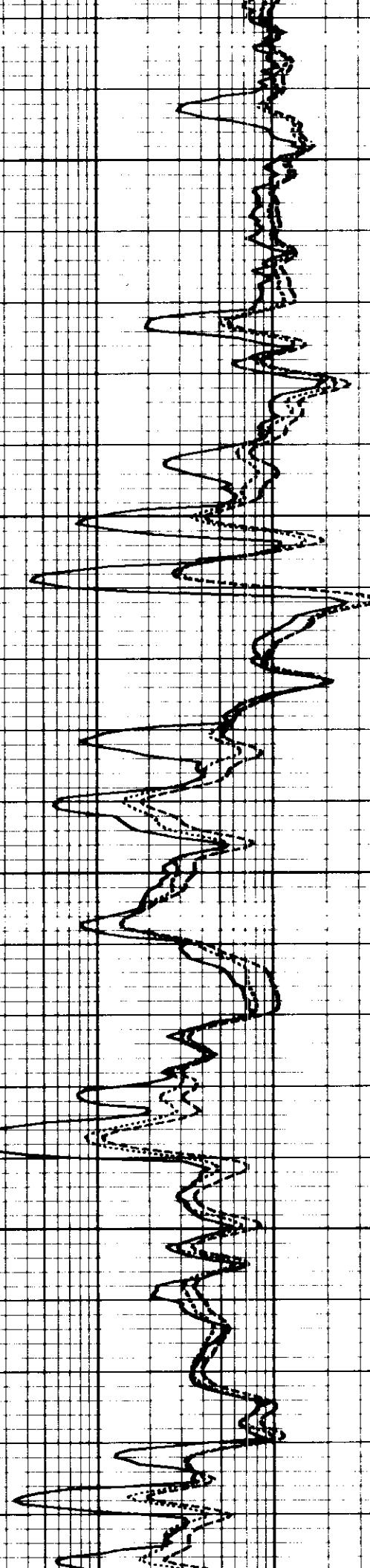




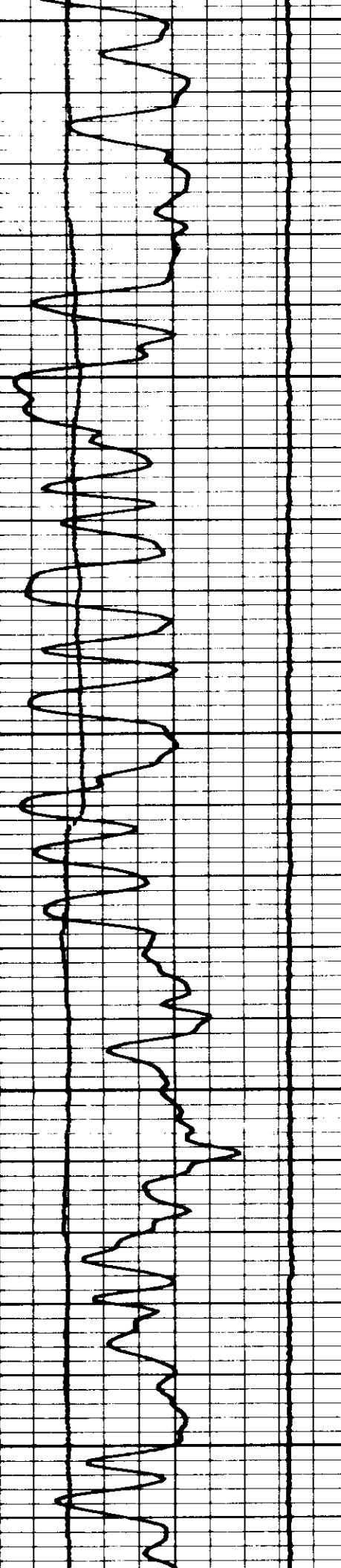
CALIPER

03200

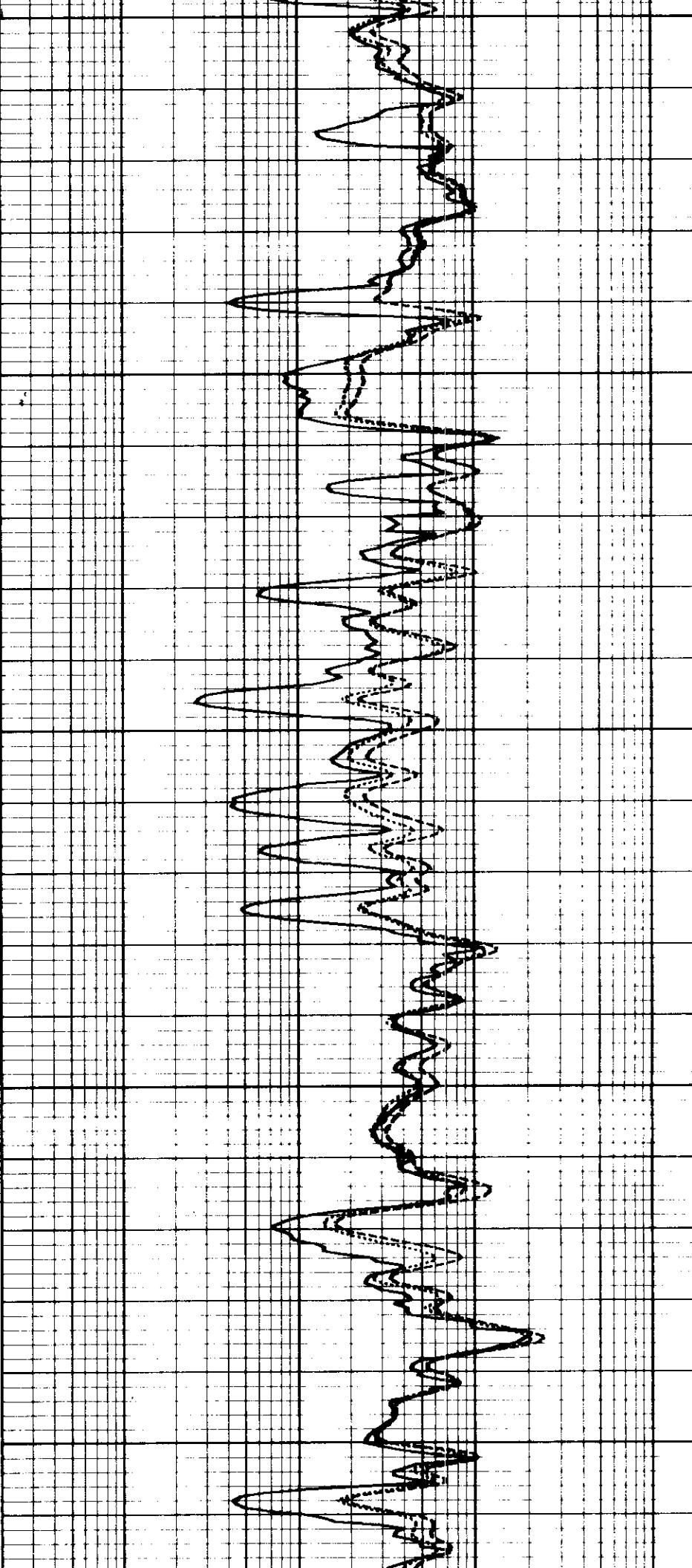
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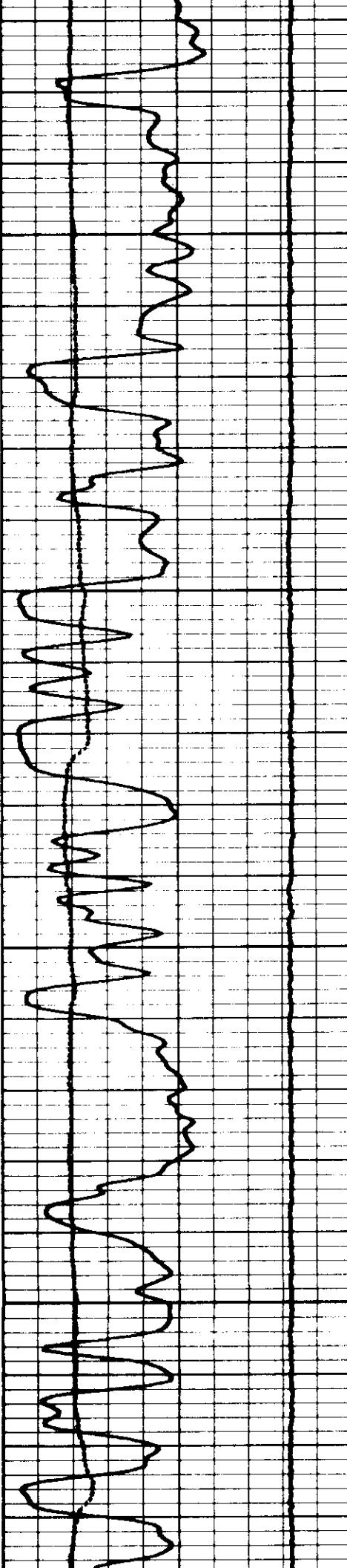
03400



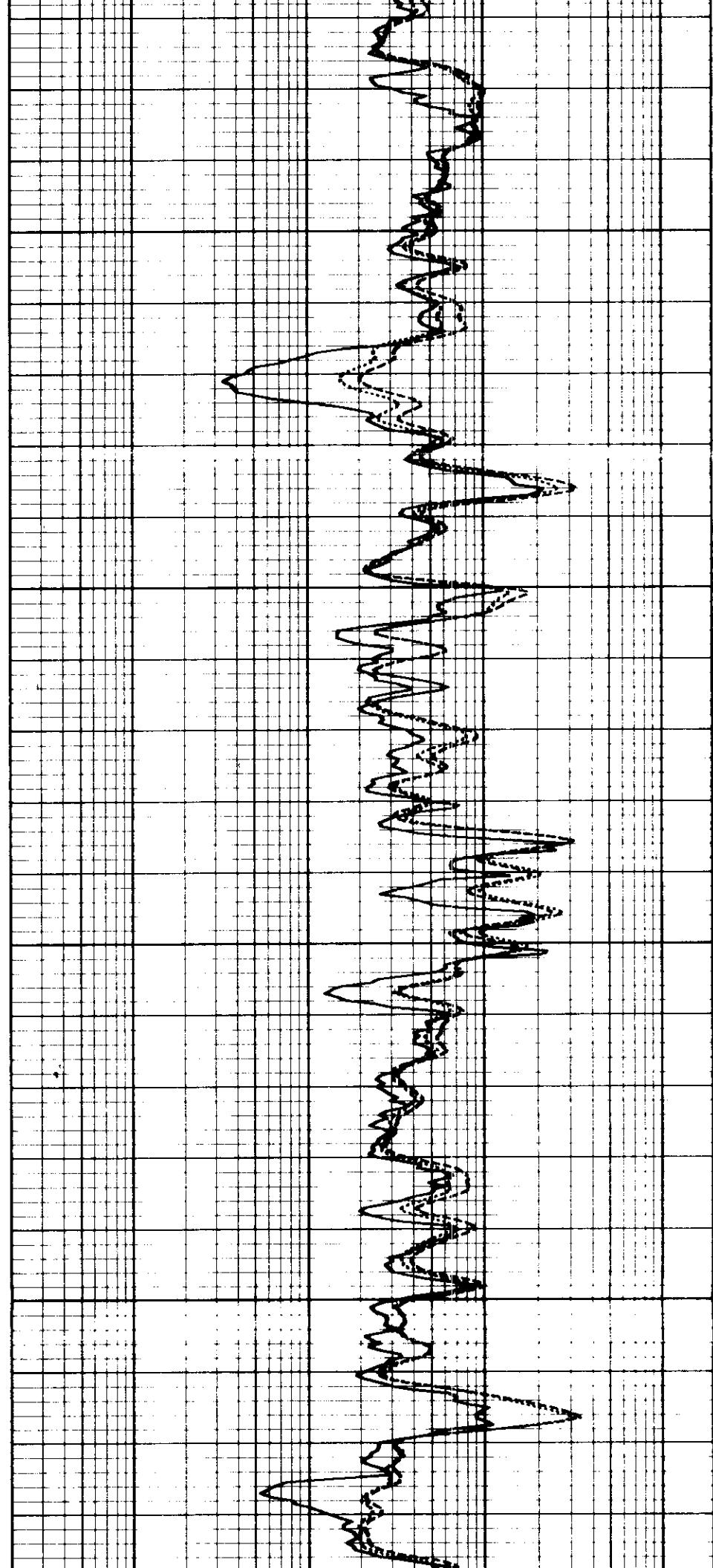
03500



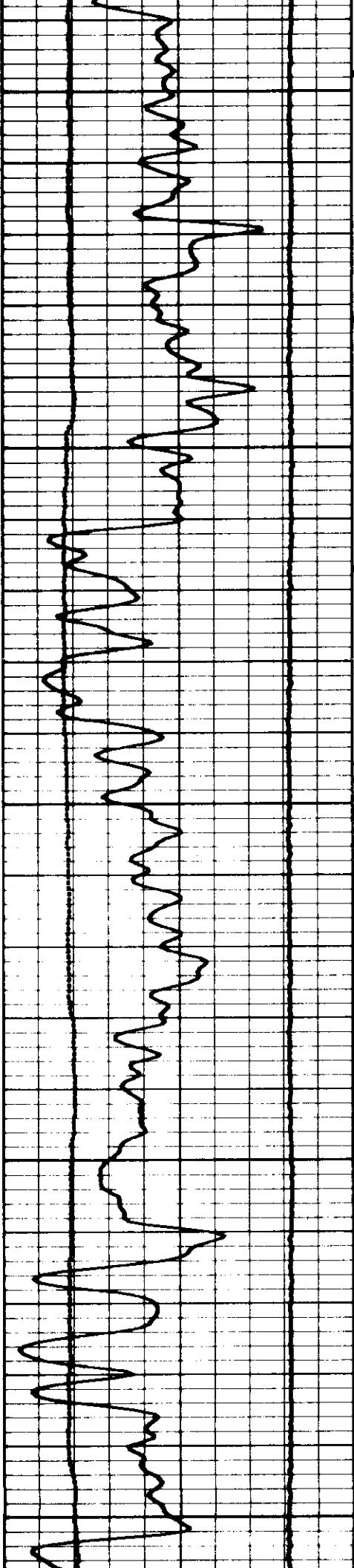
03600



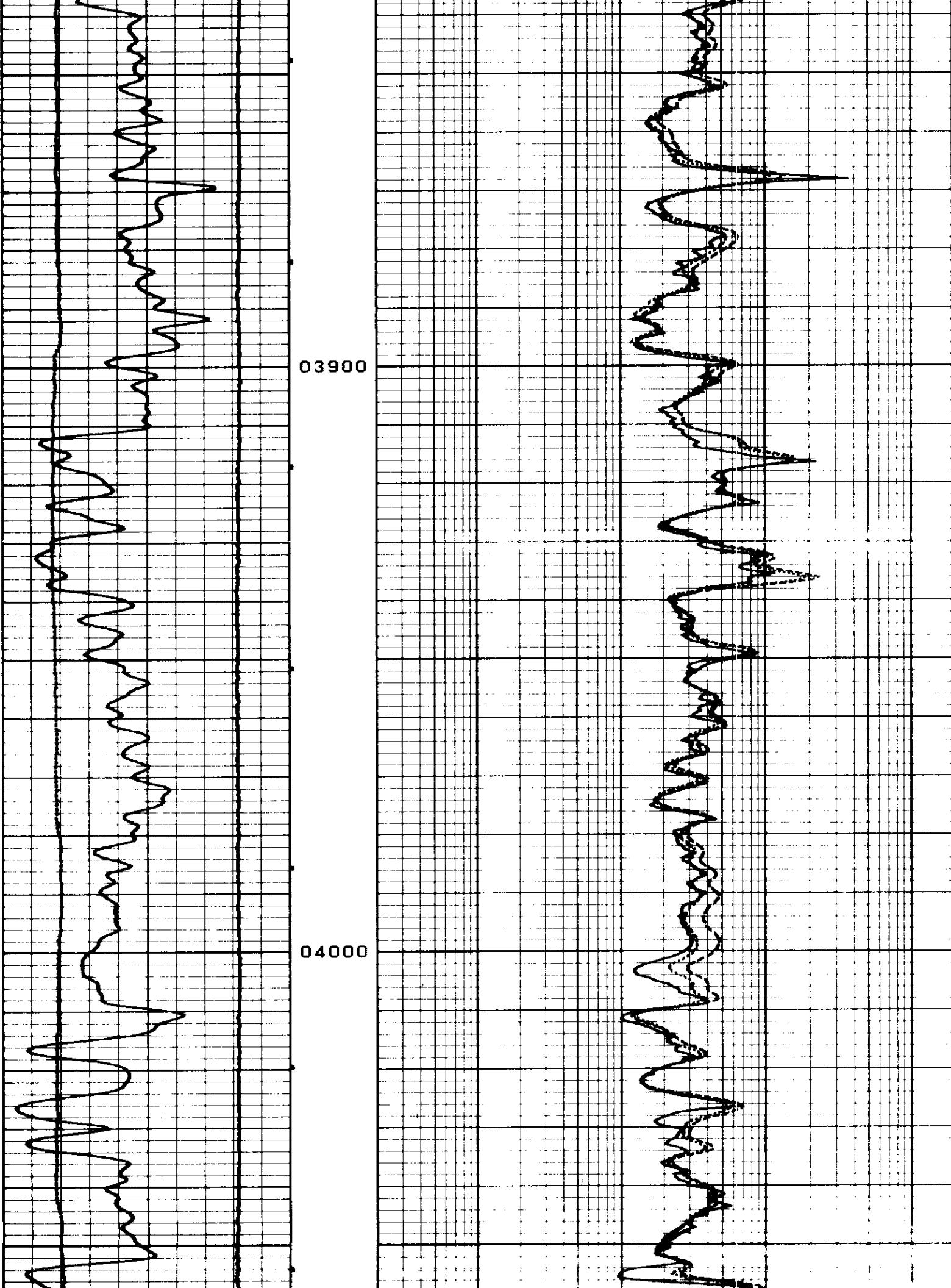
03700



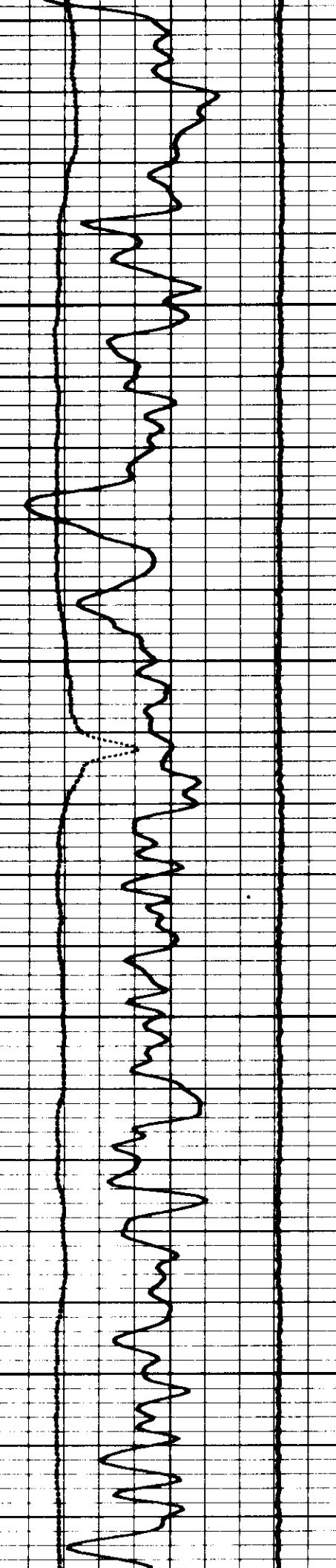
03800



03900

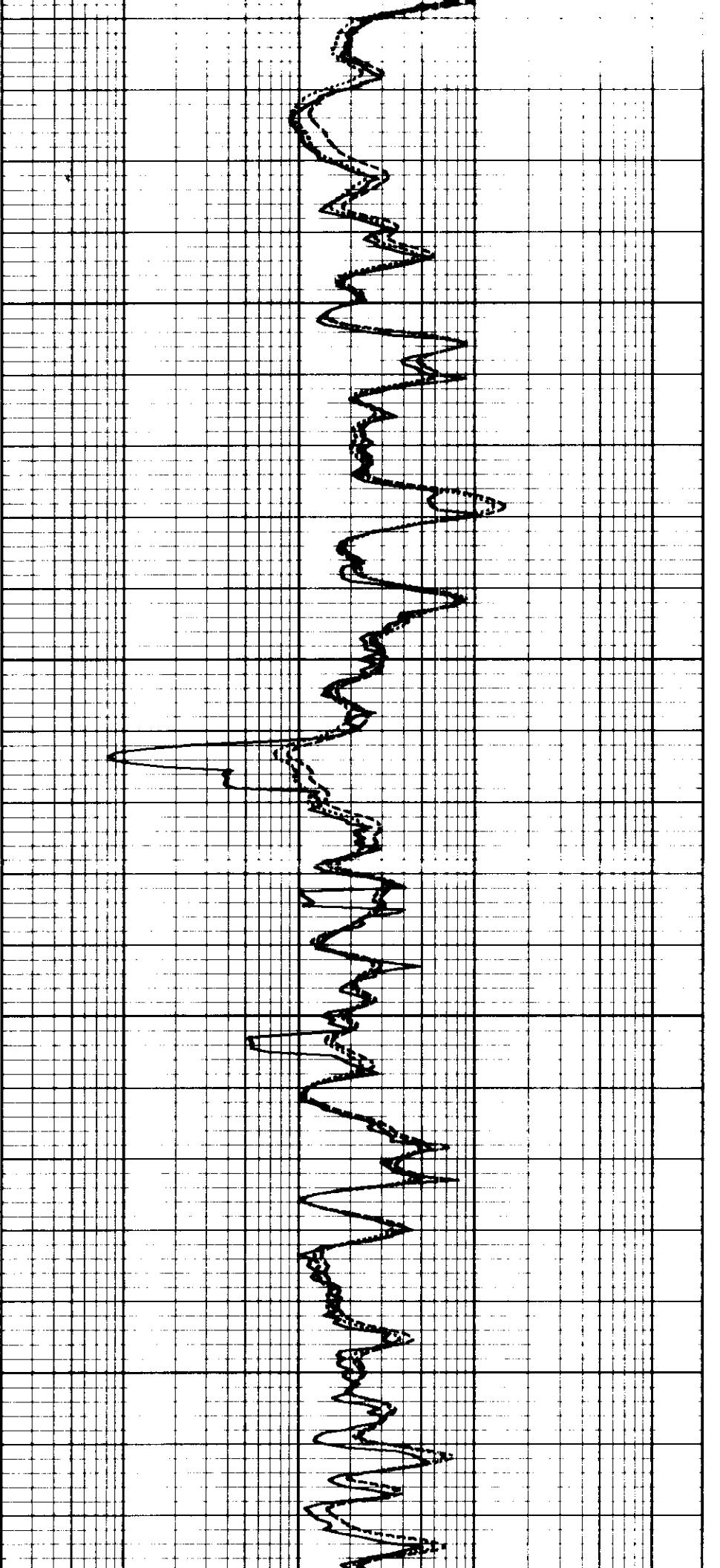


04000



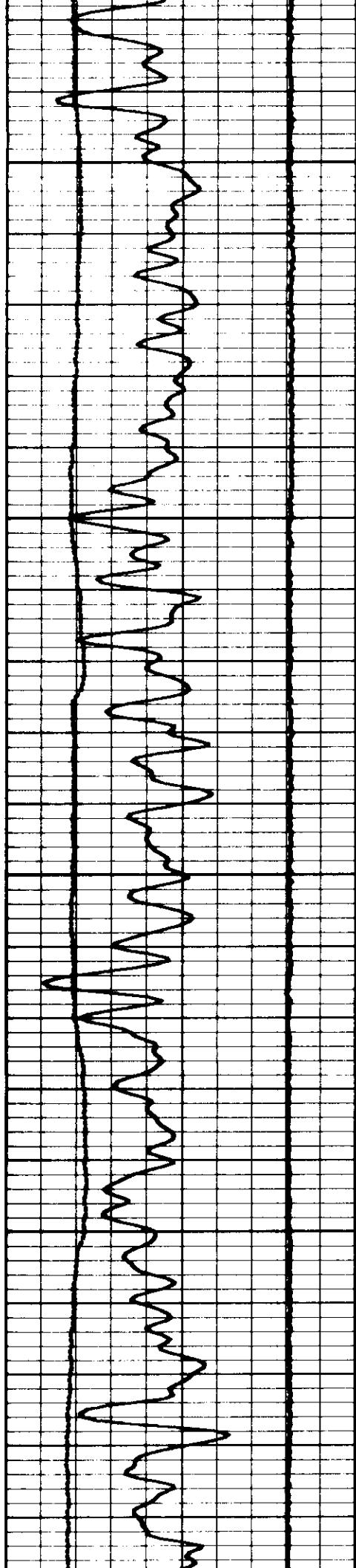
04100

This ECG strip shows a regular rhythm with a rate of approximately 60 bpm. The PR interval is normal, and the QRS complexes are narrow. The ST segment is slightly elevated, and the T waves are prominent and upright.

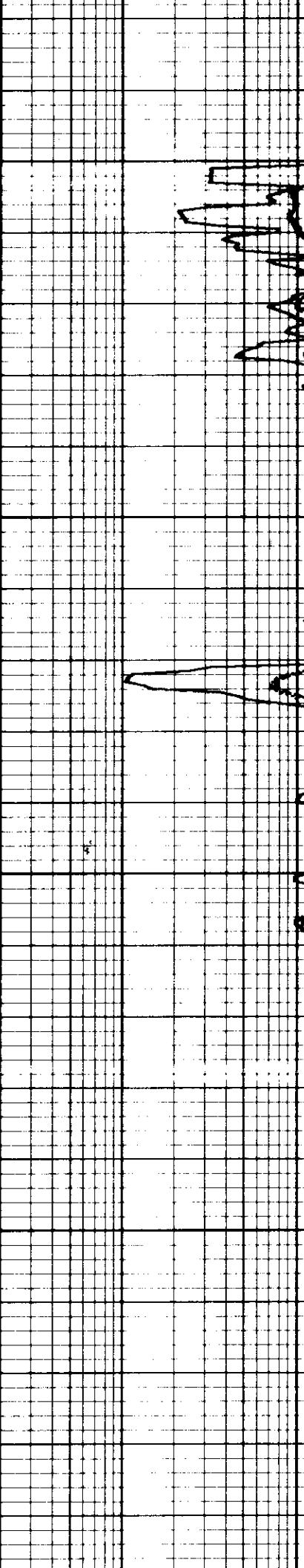


04200

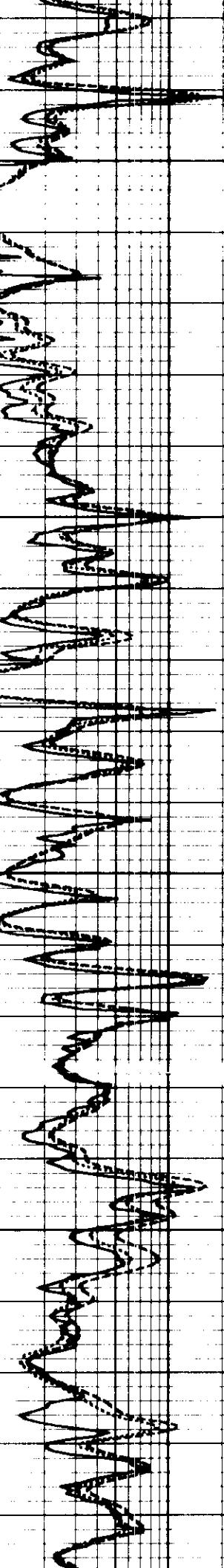
This ECG strip shows a regular rhythm with a rate of approximately 60 bpm. The PR interval is normal, and the QRS complexes are narrow. The ST segment is slightly elevated, and the T waves are prominent and upright.



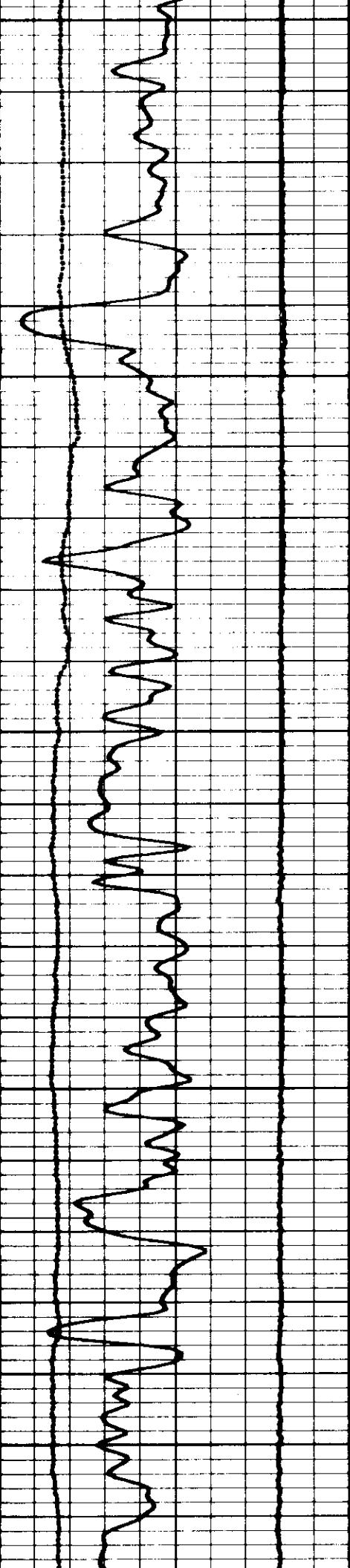
04300



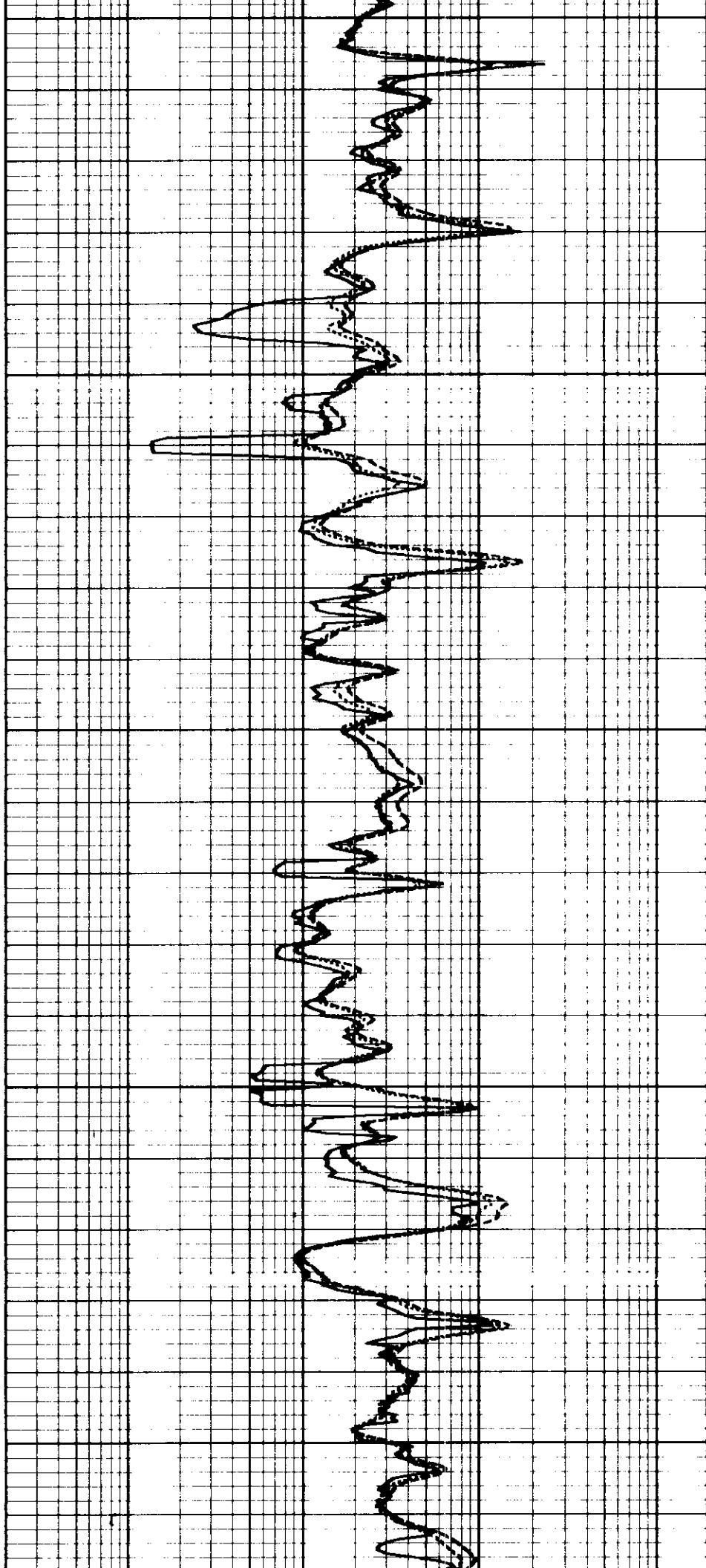
04400



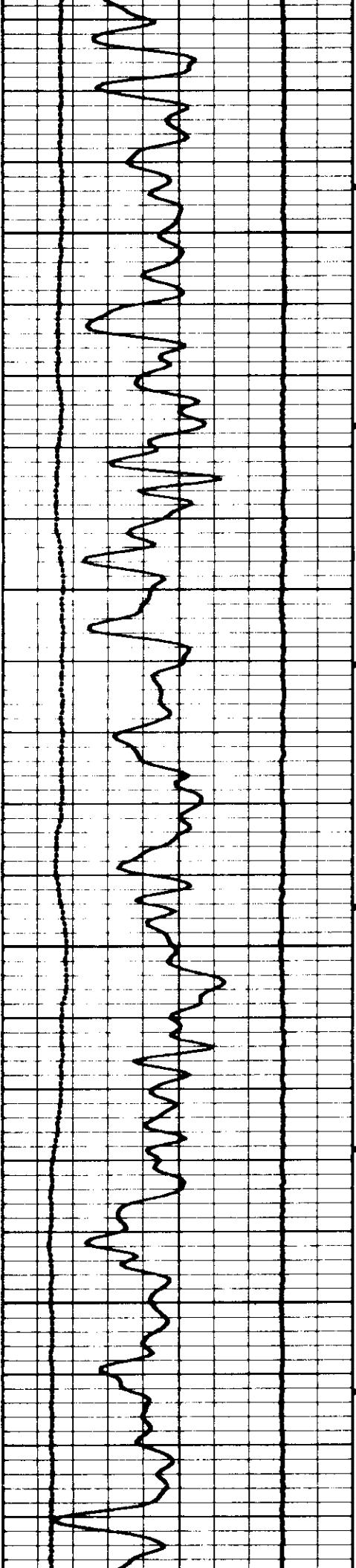
04500



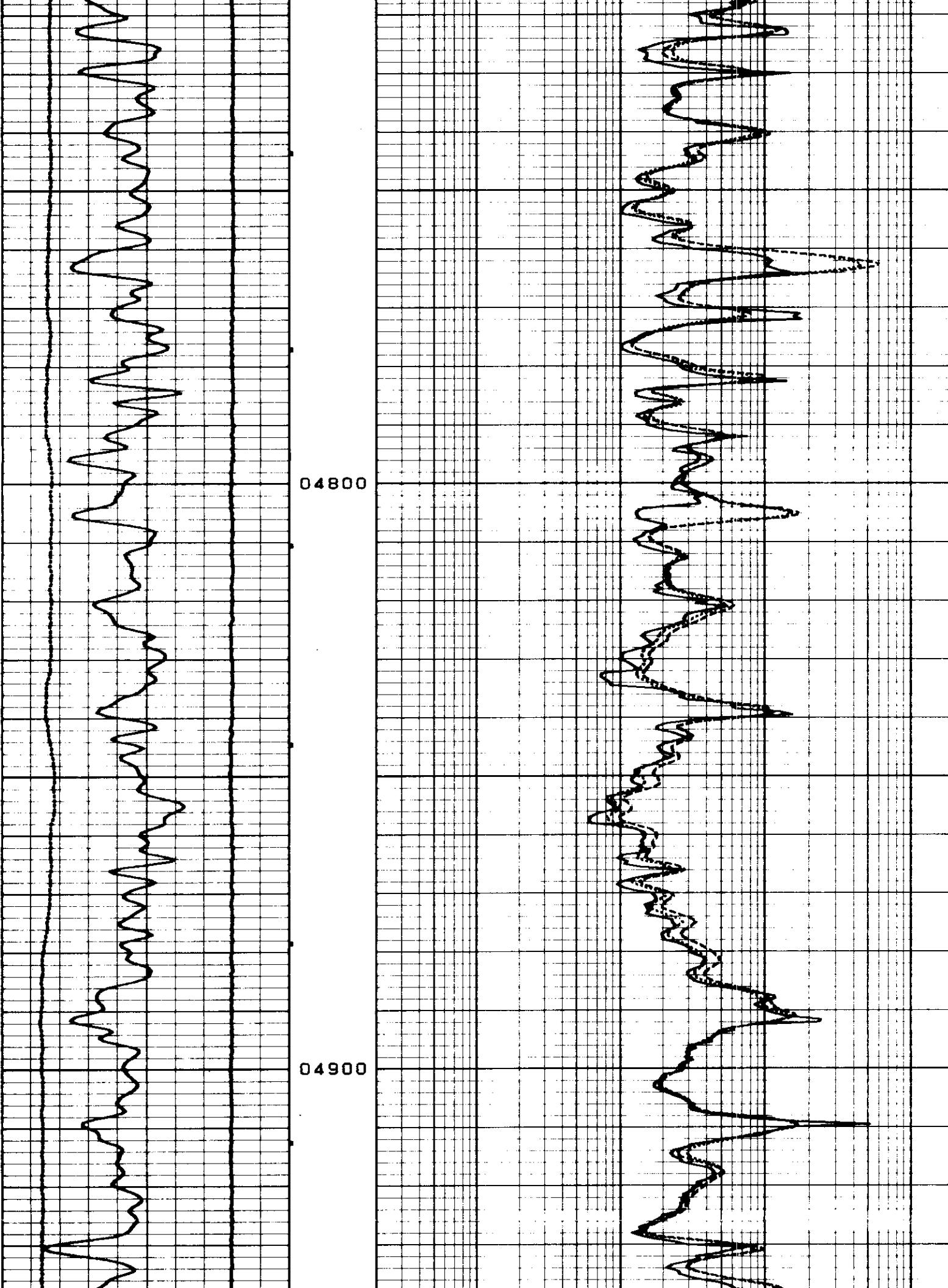
04600



04700

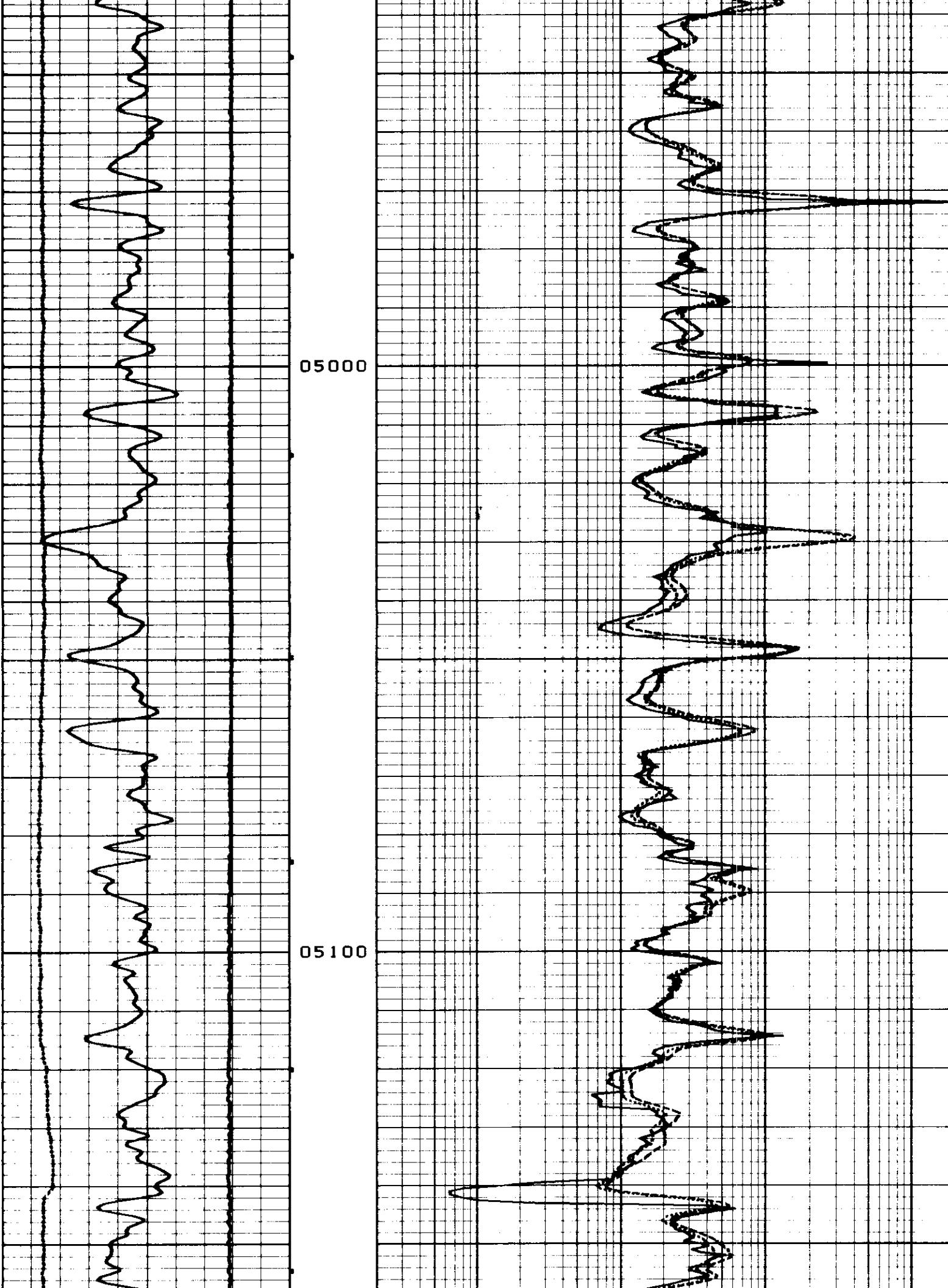


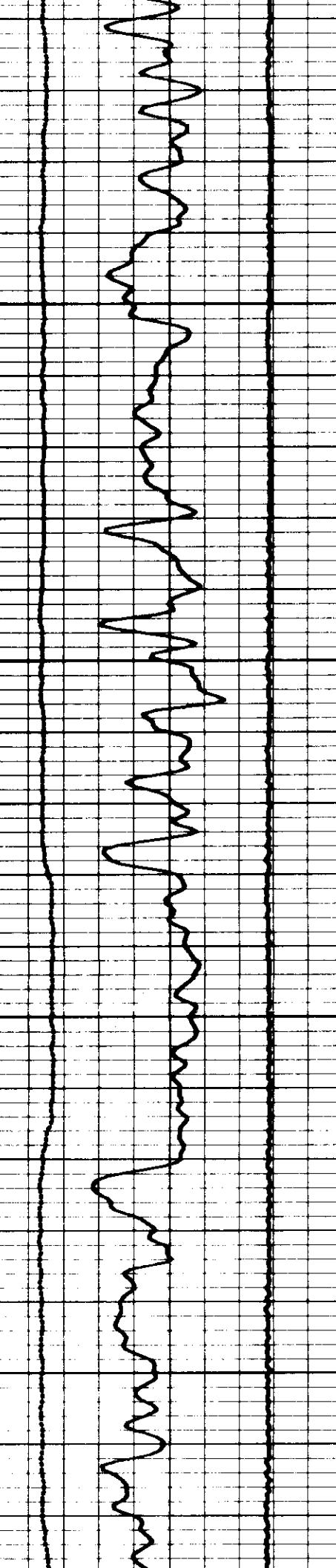
04800



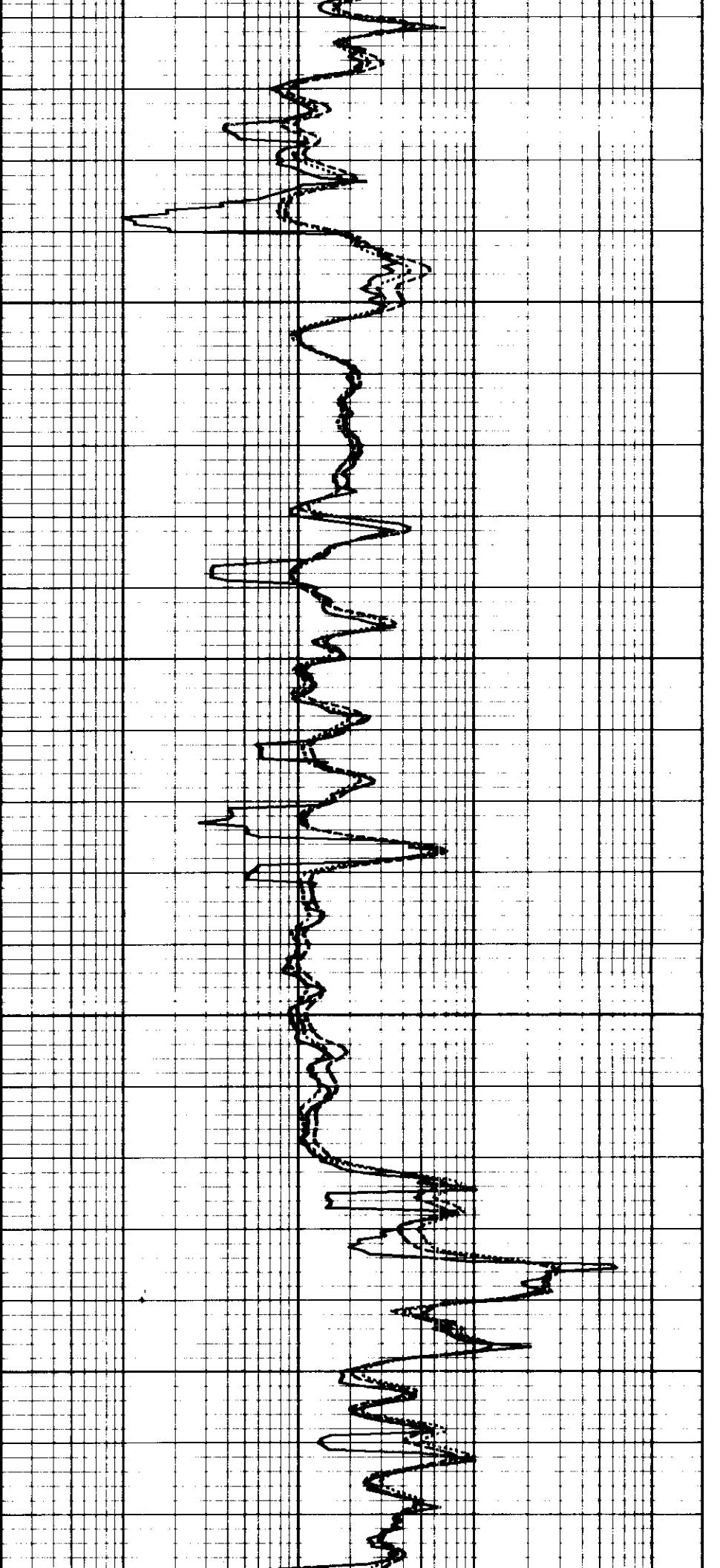
04900







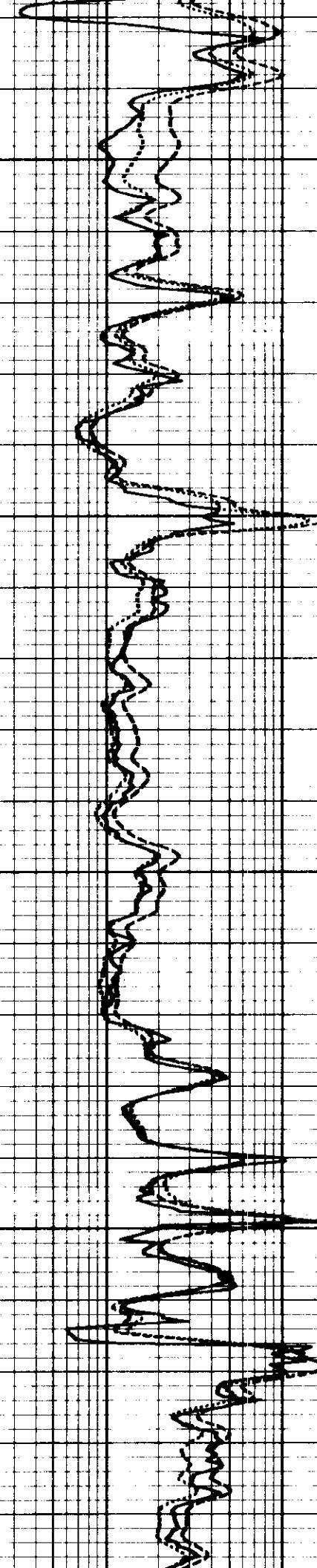
05200



05300

05400

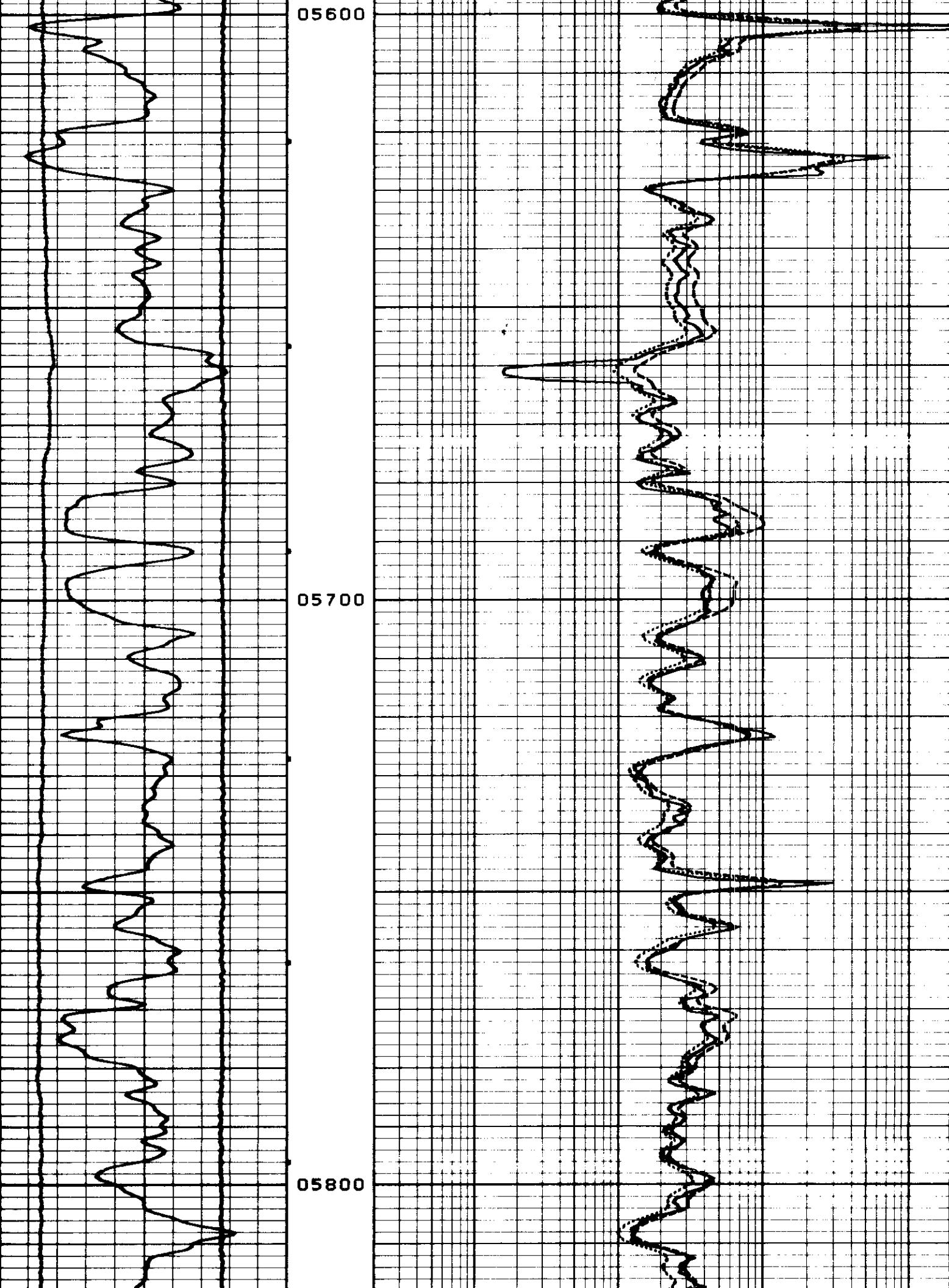
05500

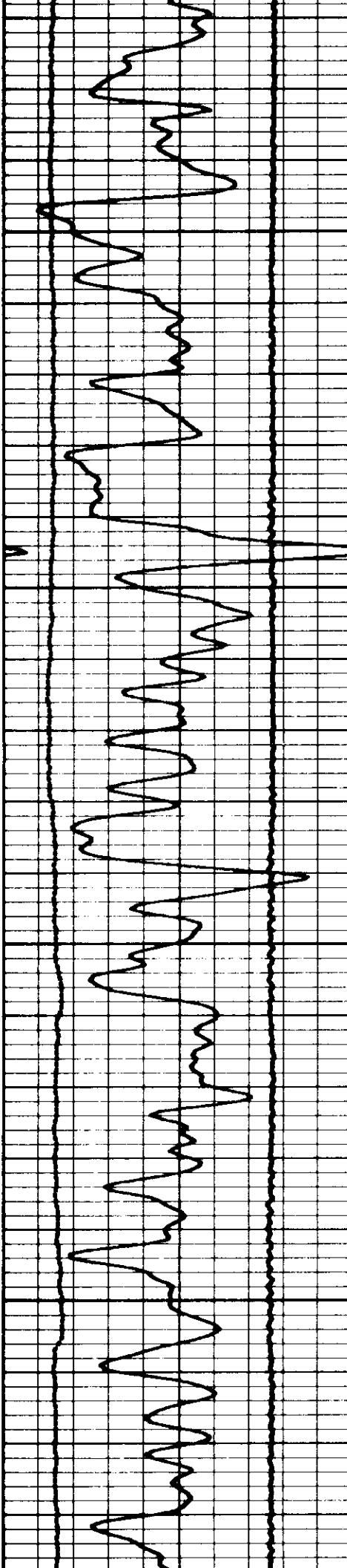


05600

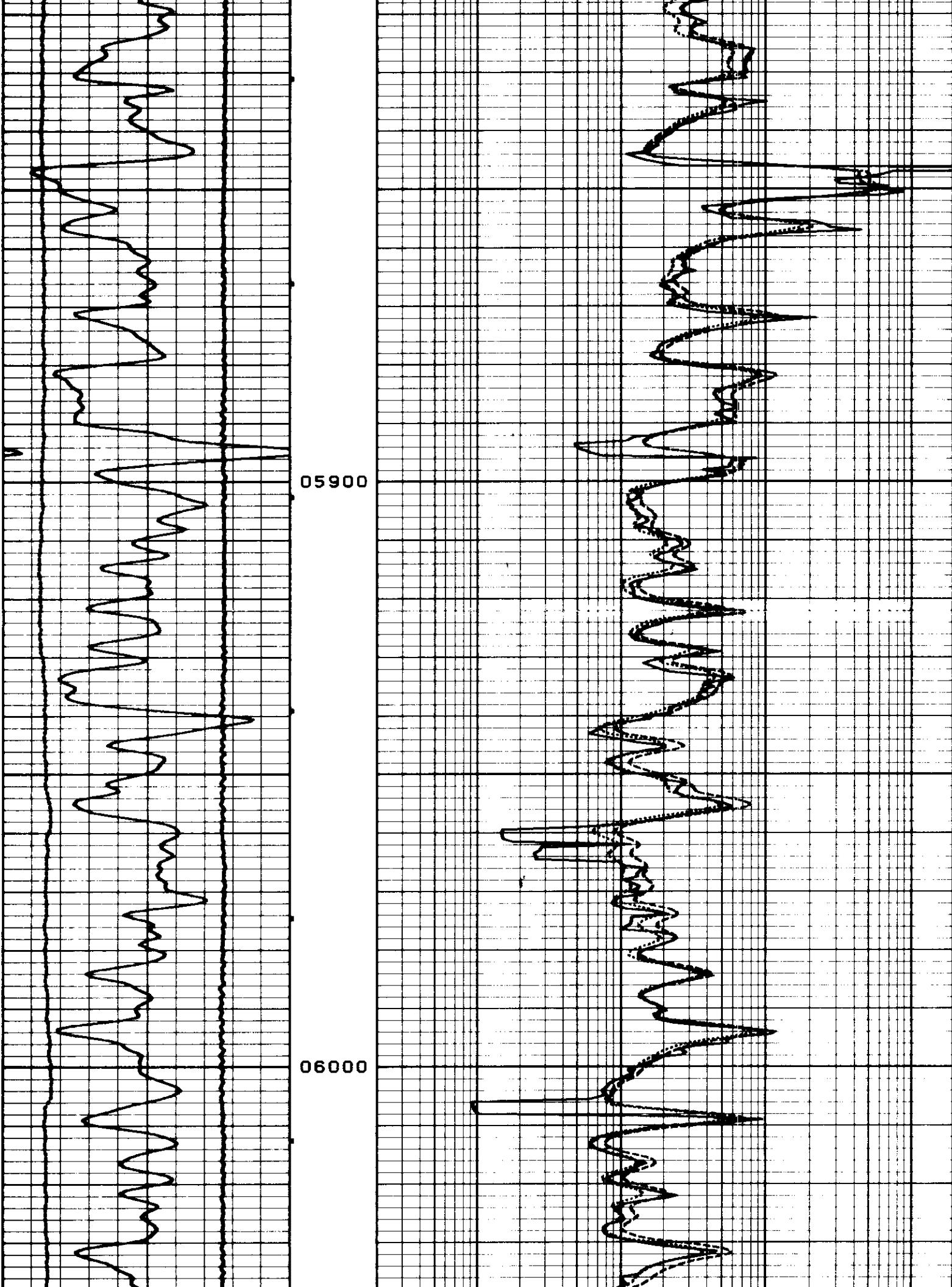
05700

05800

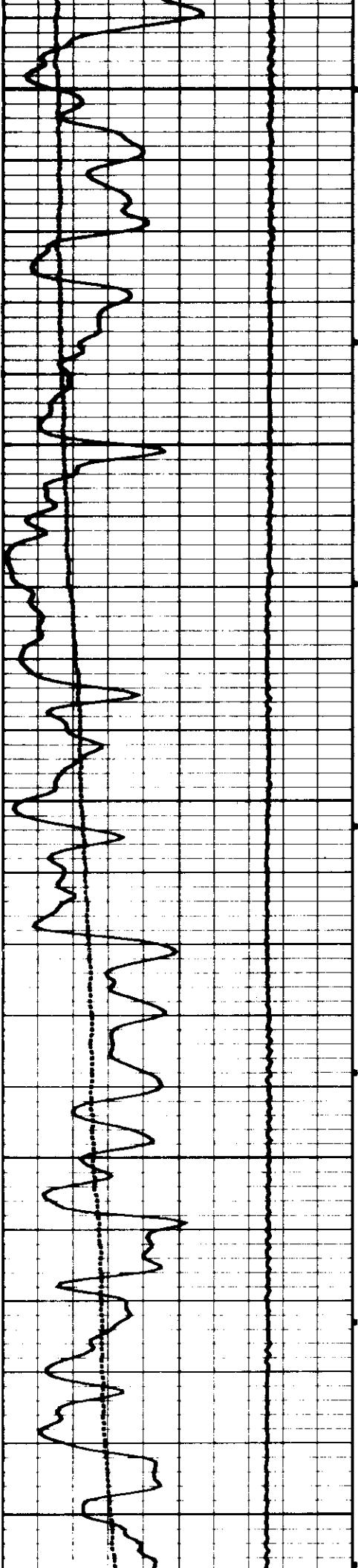




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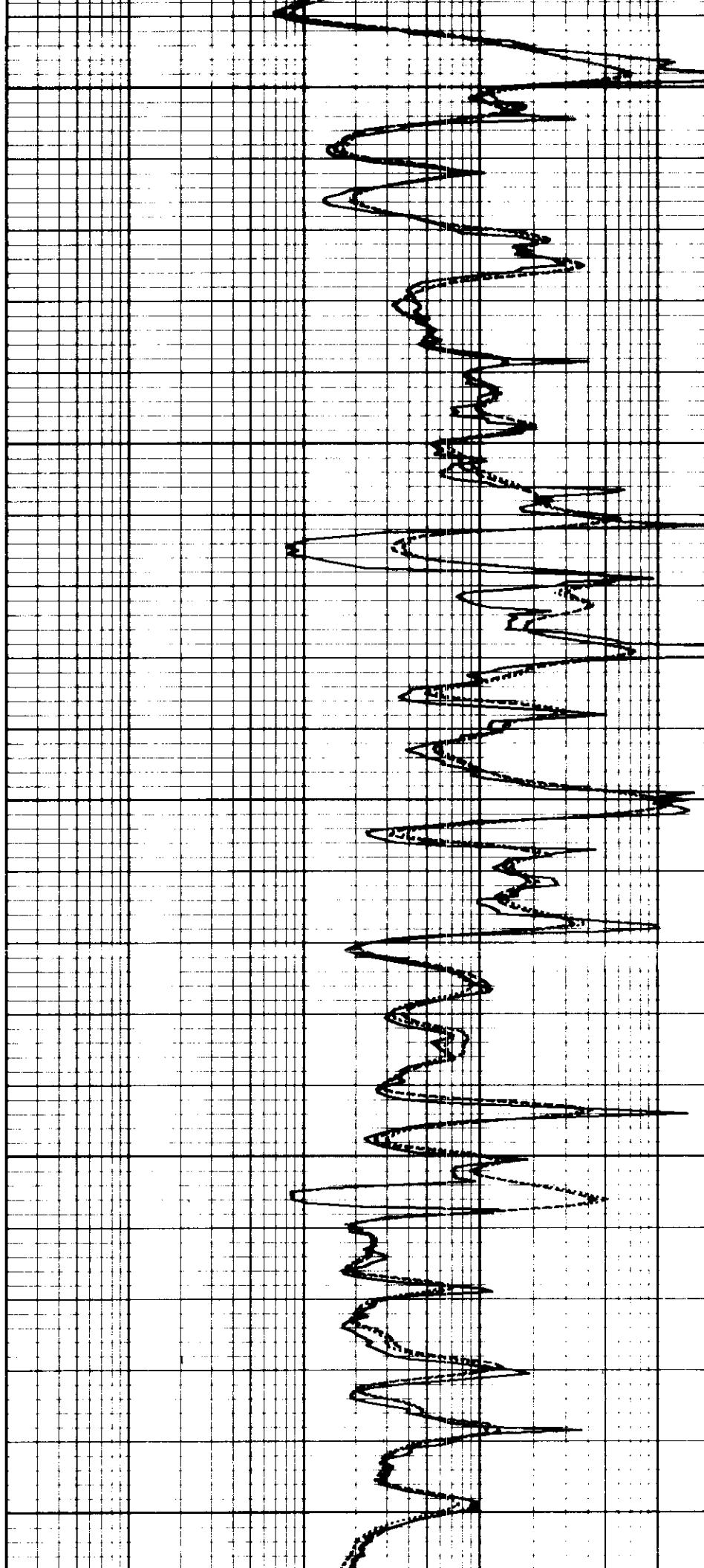


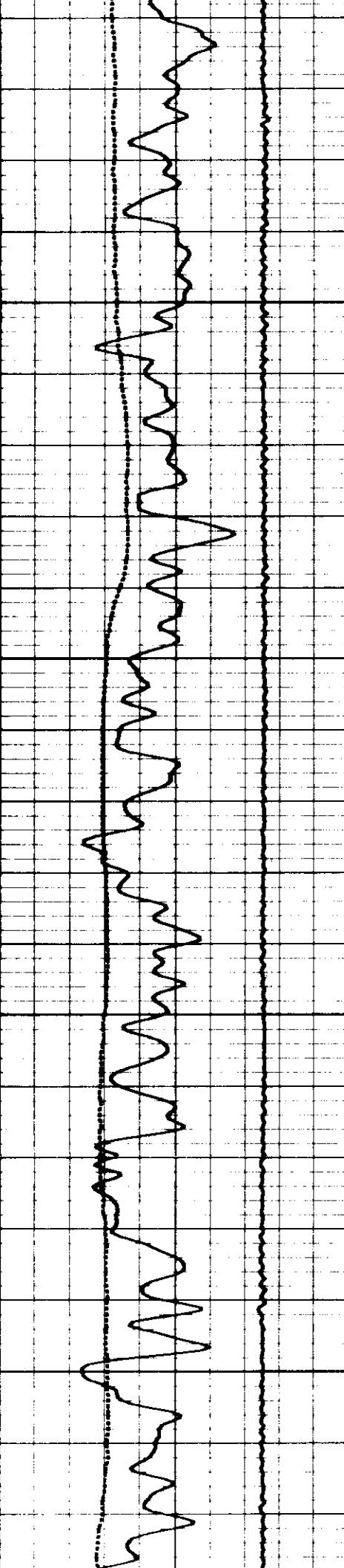
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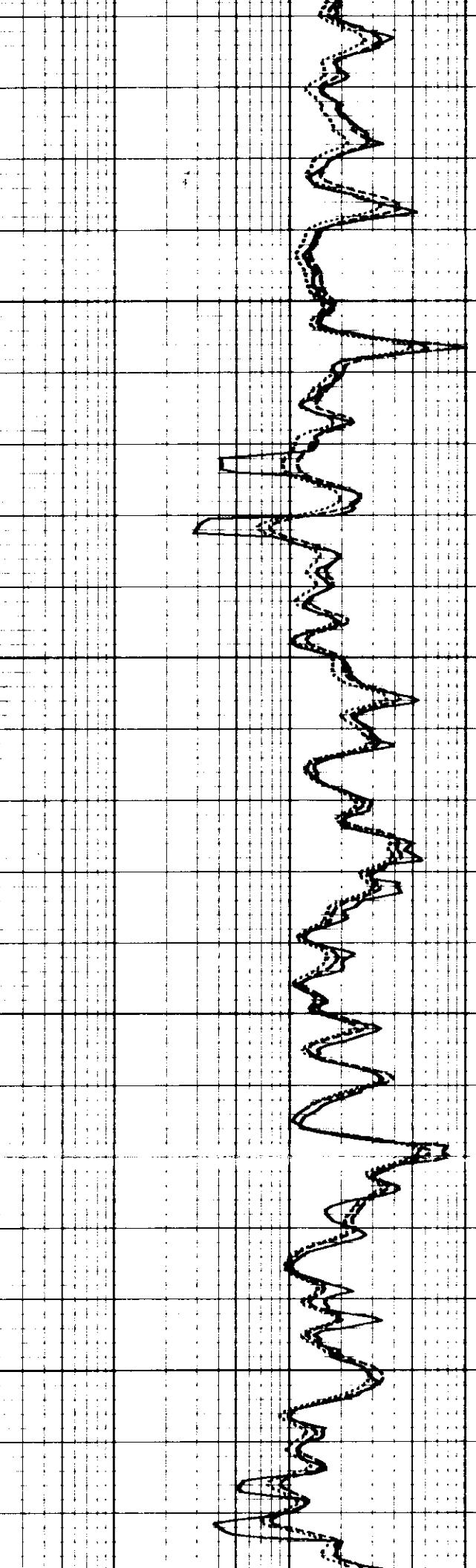
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06200

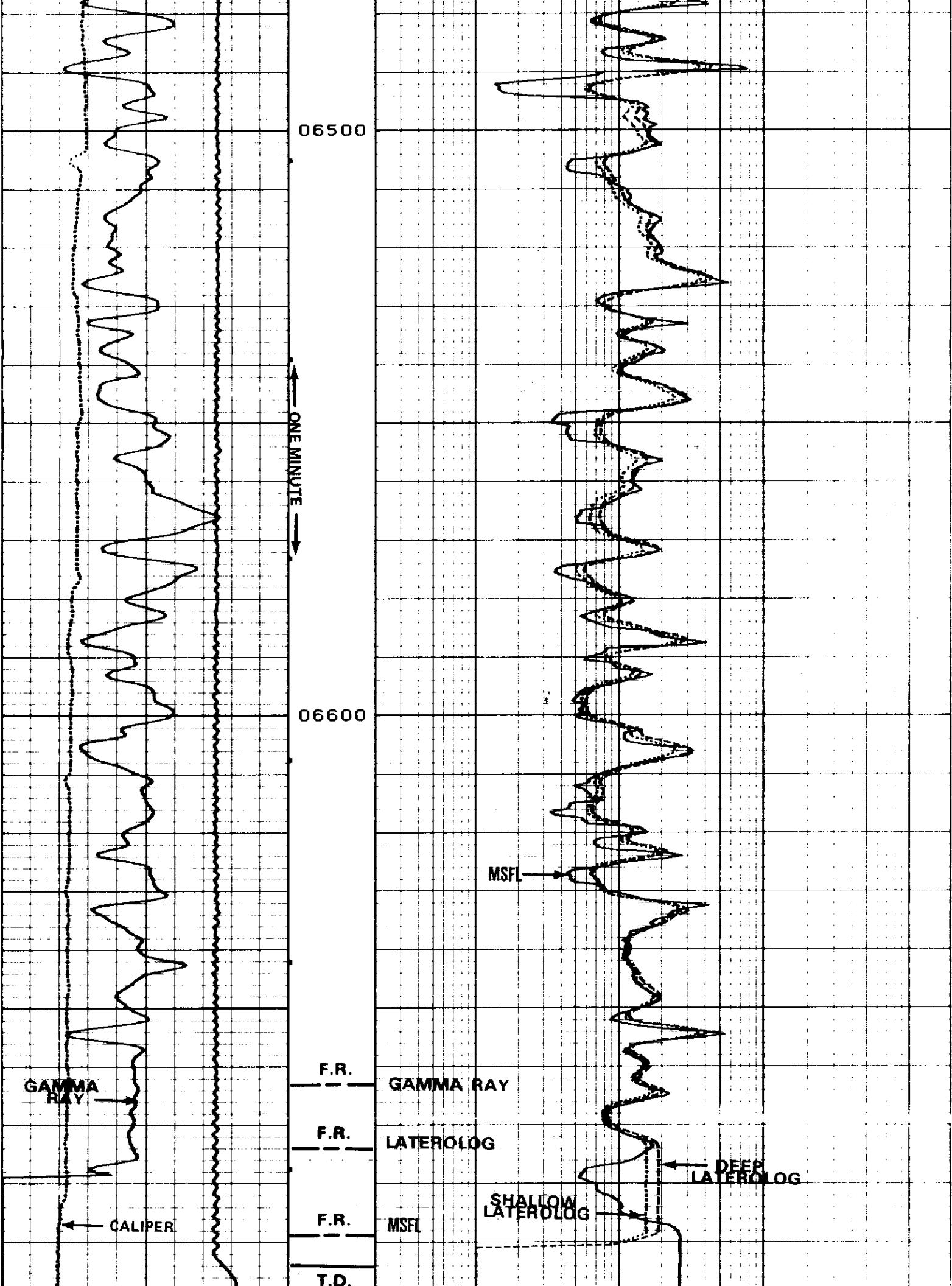




06300



06400

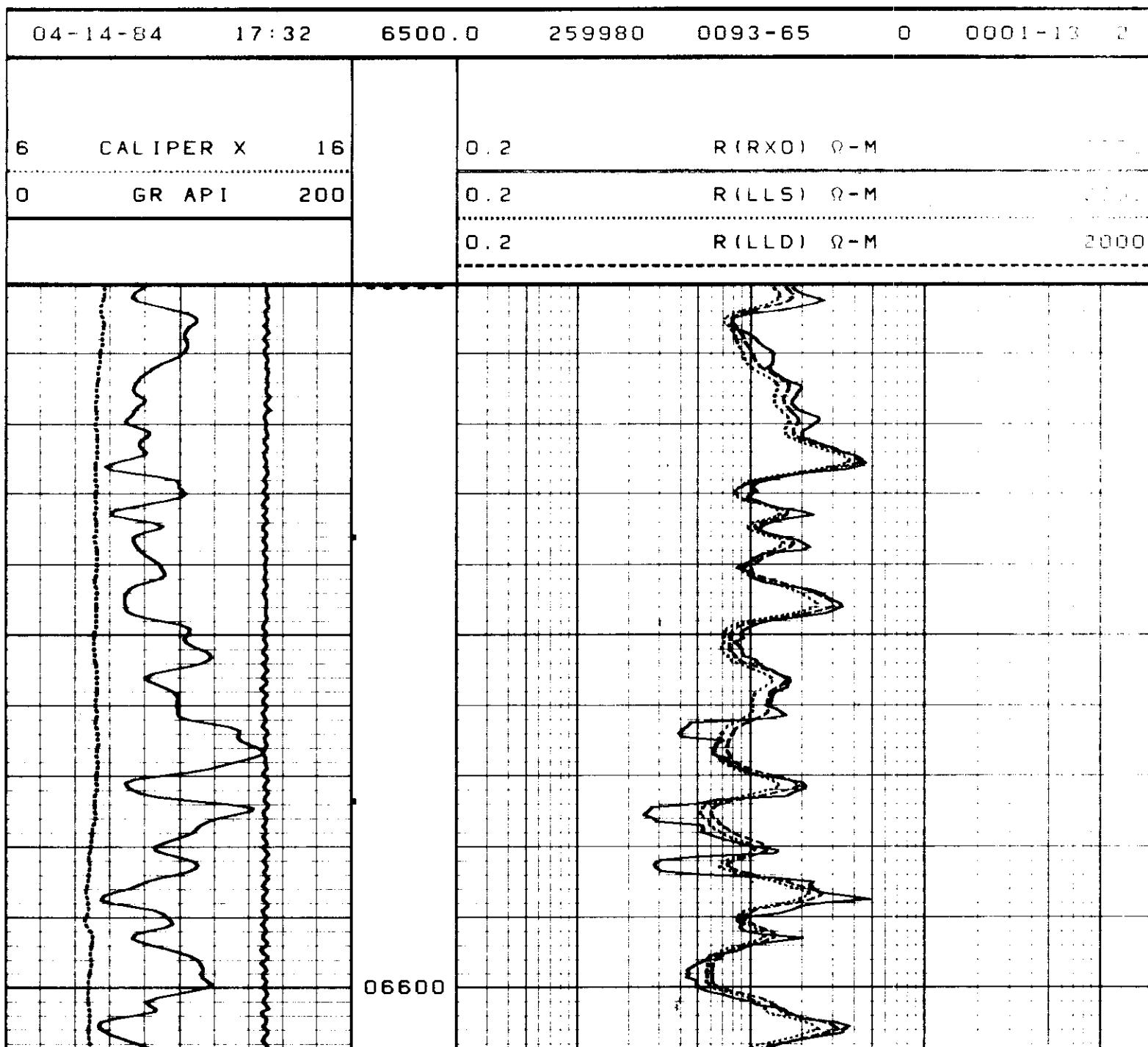


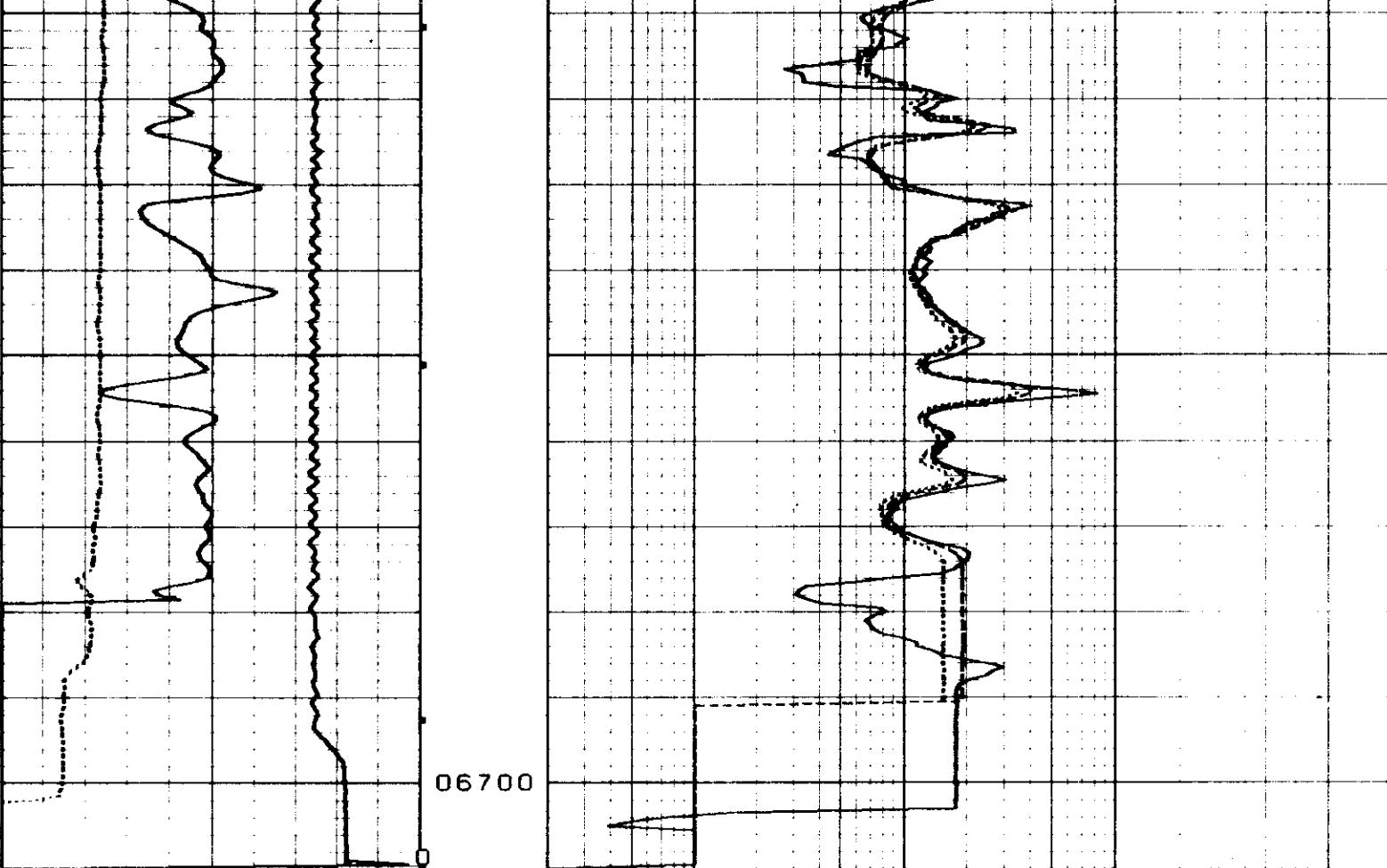
06700

TENSION →

6 CALIPER X 16	0.2	R (RXO) Ω-M	2000
0 GR API 200	0.2	R (LLS) Ω-M	2000
	0.2	R (LLD) Ω-M	2000
04-14-84	17:38	6710.0	259980 0093-65 0 0001-13 3

REPEAT SECTION

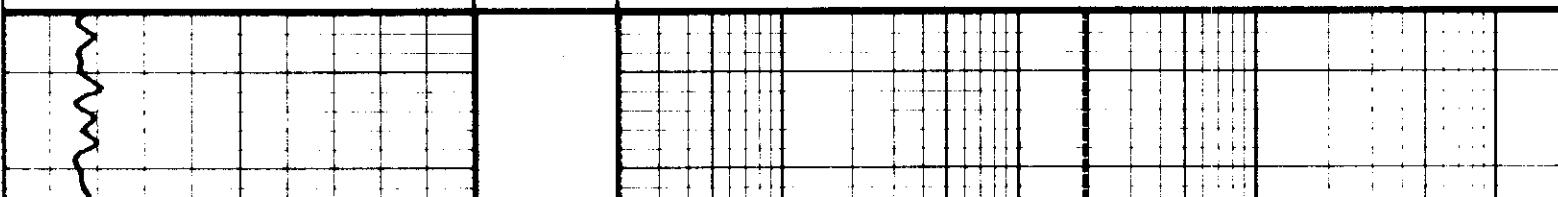


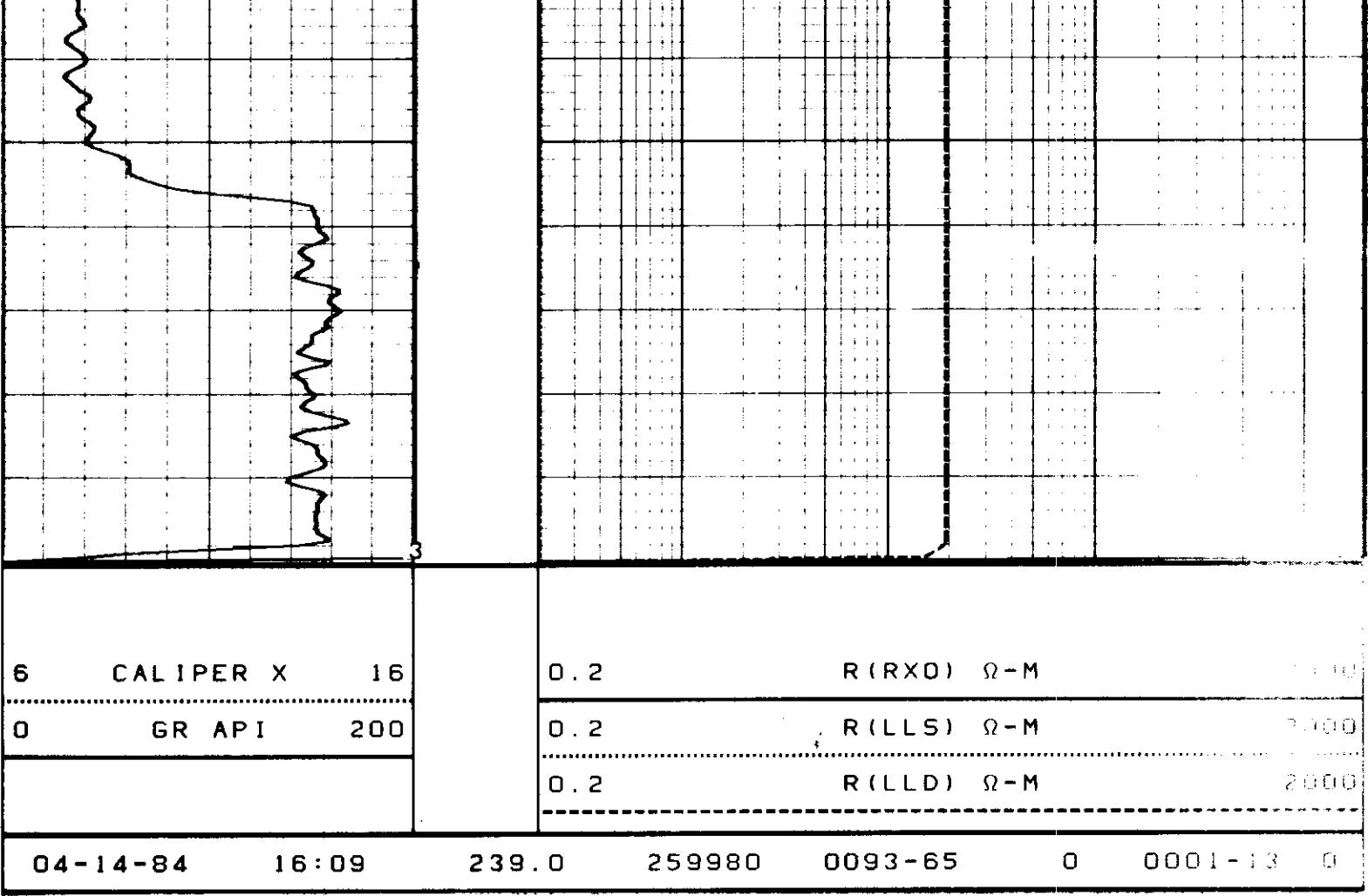


6 CALIPER X 16	0.2	R (RX0) $\Omega\text{-M}$	2000
0 GR API 200	0.2	R (LLS) $\Omega\text{-M}$	2000
REPEAT SECTION	0.2	R (LLD) $\Omega\text{-M}$	2000
04-14-84	17:28	6710.0	259980 0093-65 0 0001-13 2

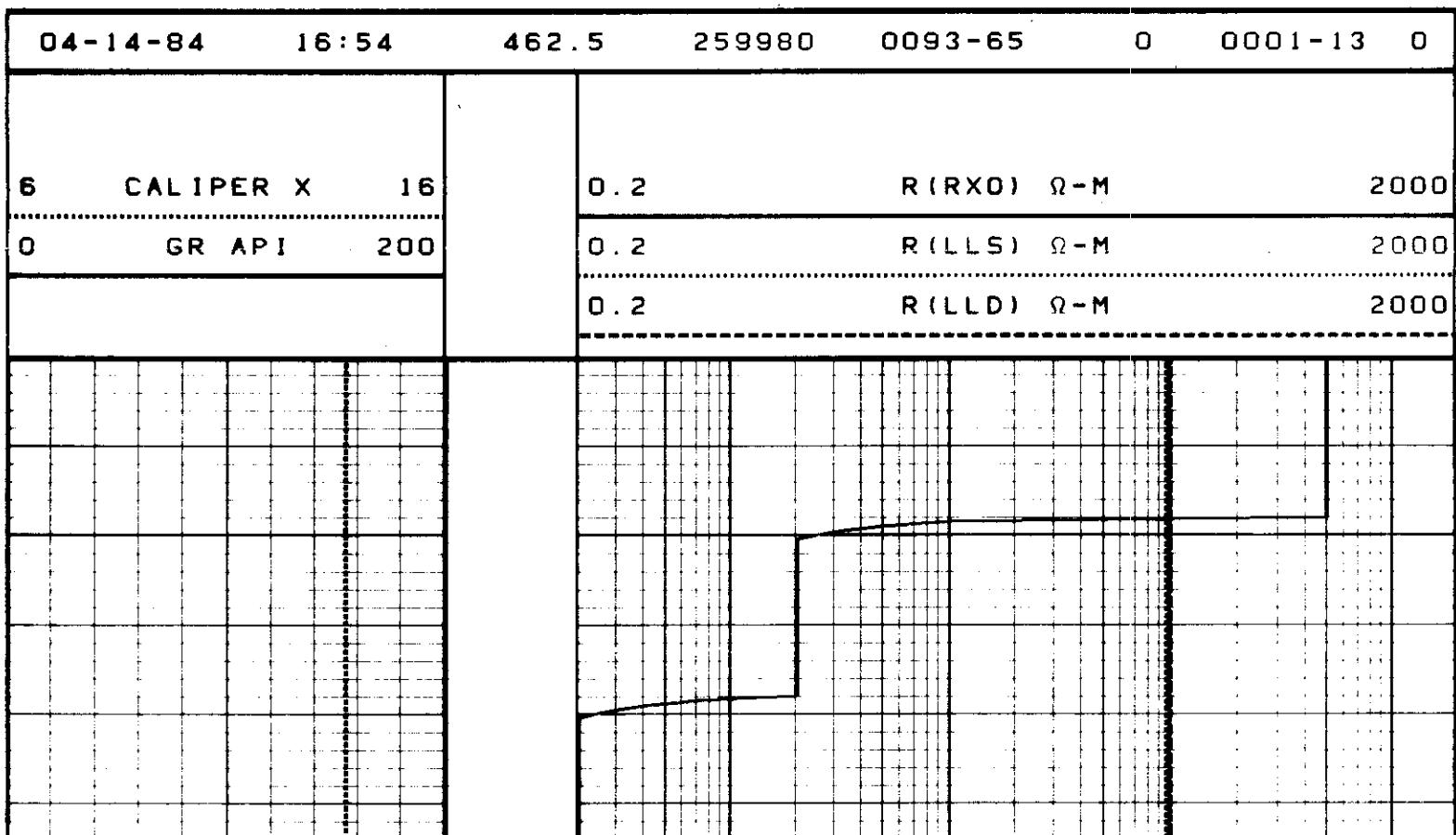
GAMMA RAY CALIBRATION

04-14-84	16:09	239.0	259980	0093-65	0	0001-13	0
6 CALIPER X 16	0.2	R (RX0) $\Omega\text{-M}$	2000				
0 GR API 200	0.2	R (LLS) $\Omega\text{-M}$	2000				
	0.2	R (LLD) $\Omega\text{-M}$	2000				



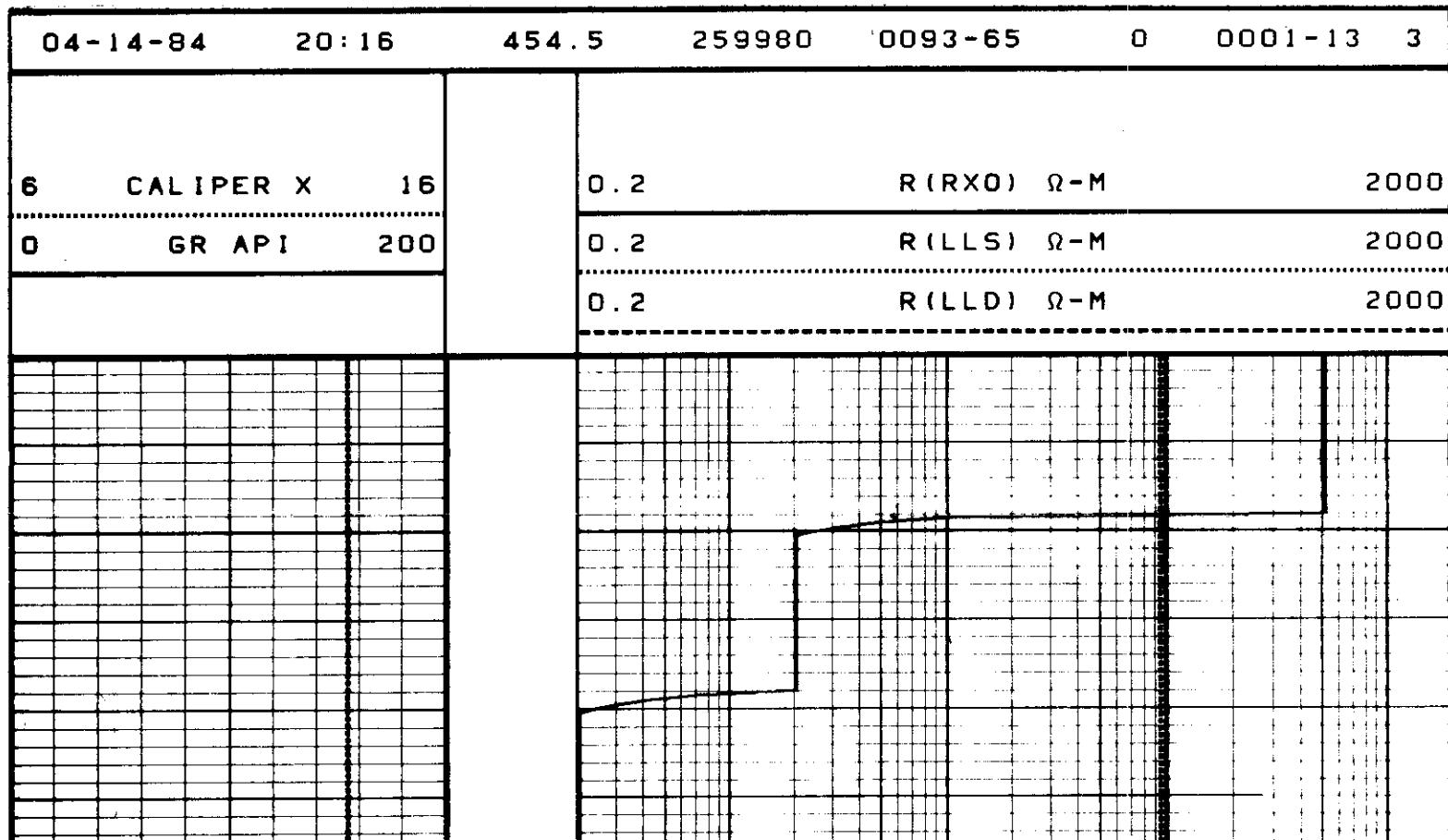


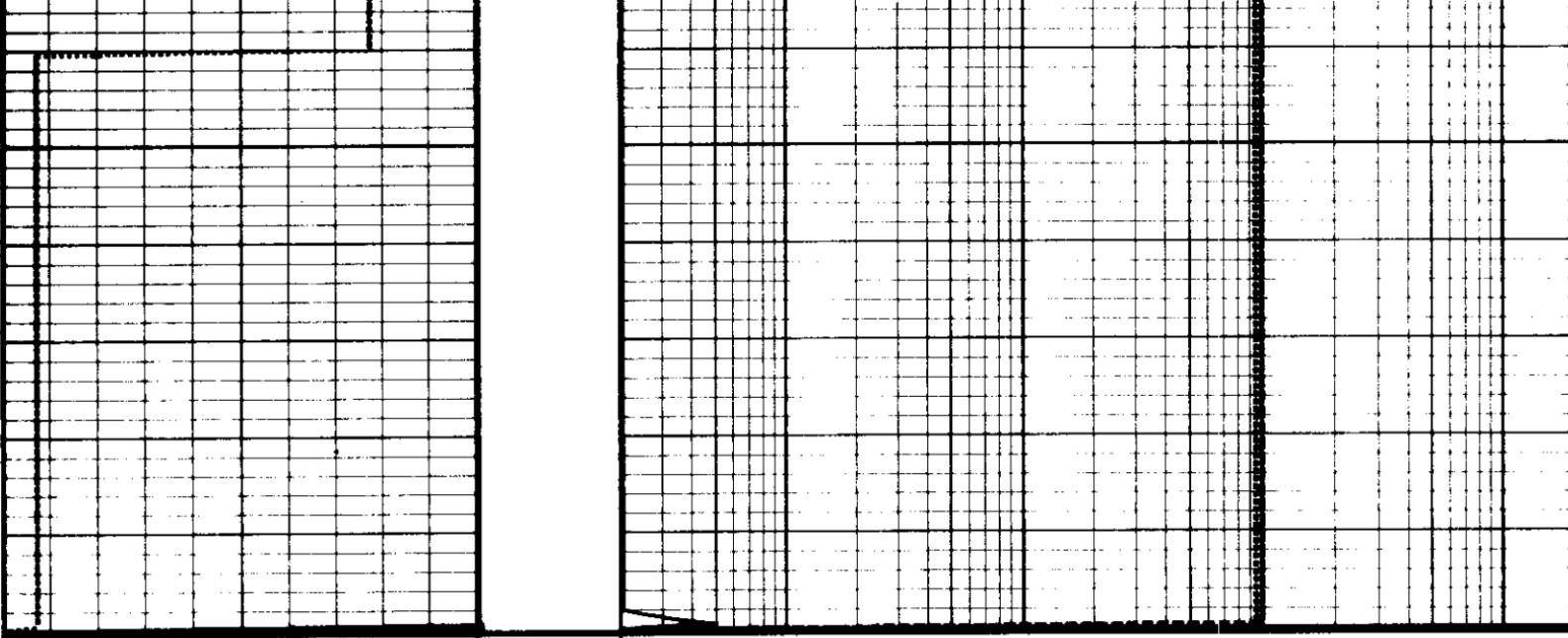
CALIBRATION BEFORE SURVEY



[Graph Paper]					
6	CALIPER X	16	0.2	R (RXO) $\Omega\text{-M}$	2000
0	GR API	200	0.2	R (LLS) $\Omega\text{-M}$	2000
			0.2	R (LLD) $\Omega\text{-M}$	2000
04-14-84	16:54	462.5	259980	0093-65	0 0001-13 0

CALIBRATION AFTER SURVEY





6	CALIPER X	16	0.2	R (RX0) $\Omega\text{-M}$	2000
0	GR API	200	0.2	R (LLS) $\Omega\text{-M}$	2000
			0.2	R (LLD) $\Omega\text{-M}$	2000

04-14-84 20:16 454.5 259980 0093-65 0 0001-13 3

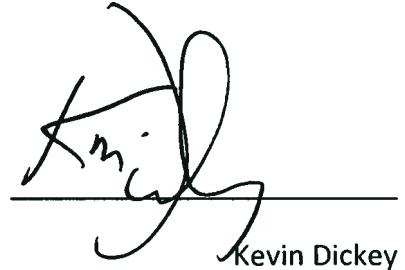
ATTACHMENT NO. 9

LIST OF OWNERS AND AFFIDAVIT NOTIFICATION

AFFIDAVIT OF MAILING

I, Kevin Dickey, Vice President, Operations, Petroglyph Energy, being first duly sworn, depose and state as follows: On July 24th, 2015, I caused to be mailed by certified mail, postage prepaid, return receipt requested, a copy of the Application to convert 1 well that appears on the attached sheet to water injection for enhanced recovery. It was sent to all parties who have an interest within ¼ mile radius from this well. The attached list contains the names of all parties who were notified.

Dated on this 24th day of July, 2015



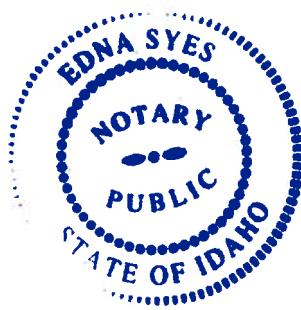
Kevin Dickey

Vice President, Operations

Petroglyph Energy

The forgoing affidavit was subscribed and sworn to before me by Kevin Dickey.

This 24 day of July, 2015.



Edna Syes
Notary Public

July 24th, 2015**Mineral, Surface, and Working Interest Owners**

To Whom It May Concern,

On July 24th, 2015 Petroglyph Energy Inc. submitted to the Environmental Protection Agency an application requesting approval to convert 19 wells to water injection wells in an enhanced recovery program. The well(s) which were submitted are all located in Antelope Creek Field which is operated under a Cooperative Plan of Development between the Ute Tribe and Petroglyph Energy.

Owners at Well's Location

Mineral: Ute Tribe

Operator: Petroglyph

Surface: Ute Tribe

Working Interest: Petroglyph 100%

Owners within Well's ¼ mile radius

No others

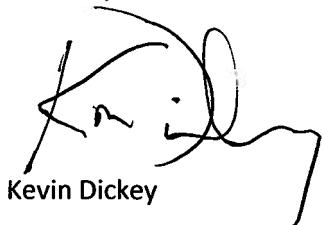
No others

No others

Anyone who would be directly and adversely affected by the authorization of the underground disposal into the Upper Green River formation may file a written request for a public hearing before the EPA. Logs and additional information on the subject wells are on file with the EPA, Groundwater Program, Mail Code 8P-W-UIC, 1595 Wynkoop St, Denver, Colorado 80202-1129.

Please contact Kevin Dickey at 208-685-7600 if you have any questions.

Sincerely,


Kevin Dickey

Vice President, Operations, Petroglyph Energy

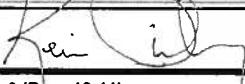
Enclosure

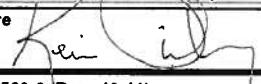
PETROGLYPH OPERATING COMPANY, INC.

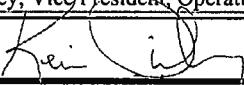
ANTELOPE CREEK FIELD

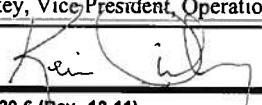
WELLS TO BE CONVERTED TO INJECTION

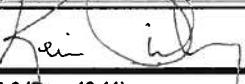
Well Name and Number	Footages	Section, Township, and Range
Ute Tribal 03-05	SHL: 2871' FNL & 752' FWL BHL: 2340' FNL & 684' FWL	3, T5S-R3W
Ute Tribal 03-12	2272' FSL & 575' FWL	3, T5S-R3W
Ute Tribal 08-11	2187' FSL 2011' FWL	8, T5S-R3W
Ute Tribal 08-12	2100' FSL & 515' FWL	8, T5S-R3W
Ute Tribal 09-01	770' FNL & 1059' FEL	9, T5S-R3W
Ute Tribal 09-04	585' FNL & 722' FWL	9, T5S-R3W
Ute Tribal 10-03	600' FNL & 1650' FWL	10, T5S-R3W
Ute Tribal 17-04	697' FNL & 636' FWL	17, T5S-R3W
Ute Tribal 17-05	1797' FNL & 620' FWL	17, T5S-R3W
Ute Tribal 17-12	2527' FSL & 612' FWL	17, T5S-R3W
Ute Tribal 20-06	2050' FNL & 1950' FWL	20, T5S-R3W
Ute Tribal 20-07	1980' FNL & 1980' FEL	20, T5S-R3W
Ute Tribal 20-11	1959' FSL & 2033' FWL	20, T5S-R3W
Ute Tribal 20-15	574' FSL & 1806' FEL	20, T5S-R3W
Ute Tribal 31-03	422' FNL & 2338' FWL	31, T5S-R3W
Ute Tribal 31-05	1980' FNL & 660' FWL	31, T5S-R3W
Ute Tribal 31-07	1976' FNL & 2168' FEL	31, T5S-R3W
Ute Tribal 31-12	1999' FSL & 748' FWL	31, T5S-R3W
Ute Tribal 36-08-E4	1796' FNL & 713' FEL	36, T5S-R4W

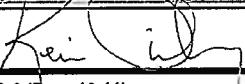
United States Environmental Protection Agency Underground Injection Control Permit Application <i>(Collected under the authority of the Safe Drinking Water Act. Sections 1421, 1422, 40 CFR 144)</i>																	
I. EPA ID Number <input type="text"/> U <input type="text"/> T/A <input type="text"/> C																	
Read Attached Instructions Before Starting For Official Use Only																	
Application approved mo day year			Date received mo day year			Permit Number <input type="text"/>			Well ID <input type="text"/>			FINDS Number <input type="text"/>					
II. Owner Name and Address Owner Name <input type="text"/> Petroglyph Energy, Inc.																	
Street Address <input type="text"/> 960 Broadway Ave. Suite 500 PO Box 70019				Phone Number <input type="text"/> (208) 685-7600				Street Address <input type="text"/> 960 Broadway Ave. Suite 500 PO Box 70019				Phone Number <input type="text"/> (208) 685-7600					
City <input type="text"/> Boise			State <input type="text"/> ID			ZIP CODE <input type="text"/> 83707			City <input type="text"/> Boise			State <input type="text"/> ID			ZIP CODE <input type="text"/> 83707		
IV. Commercial Facility			V. Ownership			VI. Legal Contact			VII. SIC Codes								
<input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No			<input checked="" type="checkbox"/> Private <input type="checkbox"/> Federal <input type="checkbox"/> Other			<input type="checkbox"/> Owner <input checked="" type="checkbox"/> Operator											
VIII. Well Status (Mark "x")																	
<input checked="" type="checkbox"/> A Operating		Date Started mo day year <input type="text"/>			<input checked="" type="checkbox"/> B. Modification/Conversion			<input type="checkbox"/> C. Proposed									
IX. Type of Permit Requested (Mark "x" and specify if required)																	
<input type="checkbox"/> A. Individual <input checked="" type="checkbox"/> B. Area			Number of Existing Wells <input type="text"/> 111			Number of Proposed Wells <input type="text"/> 1			Name(s) of field(s) or project(s) <input type="text"/> Antelope Creek <input type="text"/> Ute Tribal 03-05								
X. Class and Type of Well (see reverse)																	
A. Class(es) (enter code(s))		B. Type(s) (enter code(s))		C. If class is "other" or type is code 'x,' explain <input type="text"/>						D. Number of wells per type (if area permit) <input type="text"/> 1 well, type R							
<input type="text"/> II		<input type="text"/> R															
XI. Location of Well(s) or Approximate Center of Field or Project																	
Latitude Deg Min Sec			Longitude Deg Min Sec			Township and Range Sec Twp Range 1/4 Sec Feet From Line Feet From Line			<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No								
<input type="text"/> 3			<input type="text"/> 5S			<input type="text"/> 3W			<input type="text"/> NW								
XII. Indian Lands (Mark 'x')																	
XIII. Attachments <i>(Complete the following questions on a separate sheet(s) and number accordingly; see instructions)</i> For Classes I, II, III, (and other classes) complete and submit on a separate sheet(s) Attachments A-U (pp 2-6) as appropriate. Attach maps where required. List attachments by letter which are applicable and are included with your application.																	
XIV. Certification																	
I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. (Ref. 40 CFR 144.32)																	
A. Name and Title (Type or Print) <input type="text"/> Kevin Dickey Vice President, Operations																	
B. Phone No. (Area Code and No.) <input type="text"/> (208) 685-7600																	
C. Signature 																	
D. Date Signed <input type="text"/> 07/27/2015																	

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City <input type="text"/> Boise			State <input type="text"/> ID			ZIP CODE <input type="text"/> 83707			City <input type="text"/> Boise			State <input type="text"/> ID			
IV. Commercial Facility			V. Ownership			VI. Legal Contact			VII. SIC Codes						
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			<input checked="" type="checkbox"/> Private <input type="checkbox"/> Federal <input type="checkbox"/> Other			<input type="checkbox"/> Owner <input checked="" type="checkbox"/> Operator			<input type="text"/>						
VIII. Well Status (Mark "x")															
<input checked="" type="checkbox"/> A <input type="checkbox"/> Operating			Date Started mo day year <input type="text"/>			<input checked="" type="checkbox"/> B. Modification/Conversion			<input type="checkbox"/> C. Proposed						
IX. Type of Permit Requested (Mark "x" and specify if required)															
<input type="checkbox"/> A. Individual			<input checked="" type="checkbox"/> B. Area			Number of Existing Wells <input type="text"/> 111			Number of Proposed Wells <input type="text"/> 1			Name(s) of field(s) or project(s) <input type="text"/> Antelope Creek <input type="text"/> Ute Tribal 03-12			
X. Class and Type of Well (see reverse)															
A. Class(es) (enter code(s))		B. Type(s) (enter code(s))		C. If class is "other" or type is code 'x,' explain <input type="text"/>								D. Number of wells per type (if area permit) <input type="text"/> 1 well, type R			
<input type="text"/> II		<input type="text"/> R													
XI. Location of Well(s) or Approximate Center of Field or Project															
Latitude Deg Min Sec <input type="text"/> <input type="text"/> <input type="text"/>			Longitude Deg Min Sec <input type="text"/> <input type="text"/> <input type="text"/>			Township and Range Sec Twp Range 1/4 Sec Feet From Line Feet From Line <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>						<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
XIII. Attachments <i>(Complete the following questions on a separate sheet(s) and number accordingly; see instructions)</i> For Classes I, II, III, (and other classes) complete and submit on a separate sheet(s) Attachments A-U (pp 2-6) as appropriate. Attach maps where required. List attachments by letter which are applicable and are included with your application.															
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C. Signature 															
D. Date Signed <input type="text"/> 07/27/2015															

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Read Attached Instructions Before Starting For Official Use Only													
Application approved mo day year			Date received mo day year			Permit Number		Well ID		FINDS Number			
<input type="text"/>			<input type="text"/>			<input type="text"/>		<input type="text"/>		<input type="text"/>			
II. Owner Name and Address						III. Operator Name and Address							
Owner Name <input type="text"/> Petroglyph Energy, Inc.						Owner Name <input type="text"/> Petroglyph Energy, Inc.							
Street Address <input type="text"/> 960 Broadway Ave. Suite 500 PO Box 70019				Phone Number <input type="text"/> (208) 685-7600		Street Address <input type="text"/> 960 Broadway Ave. Suite 500 PO Box 70019				Phone Number <input type="text"/> (208) 685-7600			
City <input type="text"/> Boise			State <input type="text"/> ID		ZIP CODE <input type="text"/> 83707		City <input type="text"/> Boise			State <input type="text"/> ID		ZIP CODE <input type="text"/> 83707	
IV. Commercial Facility			V. Ownership			VI. Legal Contact			VII. SIC Codes				
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<input type="checkbox"/> A. Individual <input checked="" type="checkbox"/> B. Area			Number of Existing Wells <input type="text"/> 111			Number of Proposed Wells <input type="text"/> 1			Name(s) of field(s) or project(s) <input type="text"/> Antelope Creek <input type="text"/> Ute Tribal 08-11				
X. Class and Type of Well (see reverse)													
A. Class(es) (enter code(s))		B. Type(s) (enter code(s))		C. If class is "other" or type is code 'x,' explain <input type="text"/>					D. Number of wells per type (if area permit) <input type="text"/> 1 well, type R				
<input type="text"/> II		<input type="text"/> R											
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XIII. Attachments													
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C. Signature 													
D. Date Signed <input type="text"/> 07/27/2015													

 <p>United States Environmental Protection Agency Underground Injection Control Permit Application <i>(Collected under the authority of the Safe Drinking Water Act. Sections 1421, 1422, 40 CFR 144)</i></p>		I. EPA ID Number			
		U	T/A C		
Read Attached Instructions Before Starting For Official Use Only					
Application approved mo day year	Date received mo day year	Permit Number	Well ID	FINDS Number	
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	
II. Owner Name and Address			III. Operator Name and Address		
Owner Name Petroglyph Energy, Inc.			Owner Name Petroglyph Energy, Inc.		
Street Address 960 Broadway Ave. Suite 500 PO Box 70019		Phone Number (208) 685-7600	Street Address 960 Broadway Ave. Suite 500 PO Box 70019		Phone Number (208) 685-7600
City Boise	State ID	ZIP CODE 83707	City Boise	State ID	ZIP CODE 83707
IV. Commercial Facility	V. Ownership	VI. Legal Contact		VII. SIC Codes	
<input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/> Private <input type="checkbox"/> Federal <input type="checkbox"/> Other	<input checked="" type="checkbox"/> Owner <input checked="" type="checkbox"/> Operator	<input type="text"/>		
VIII. Well Status (Mark "x")					
<input checked="" type="checkbox"/> A Operating	Date Started mo day year <input type="text"/>	<input checked="" type="checkbox"/> B. Modification/Conversion	<input type="checkbox"/> C. Proposed		
IX. Type of Permit Requested (Mark "x" and specify if required)					
<input type="checkbox"/> A. Individual	<input checked="" type="checkbox"/> B. Area	Number of Existing Wells <input type="text"/> 111	Number of Proposed Wells <input type="text"/> 1	Name(s) of field(s) or project(s) Antelope Creek Ute Tribal 08-12	
X. Class and Type of Well (see reverse)					
A. Class(es) (enter code(s)) <input type="text"/> II	B. Type(s) (enter code(s)) <input type="text"/> R	C. If class is "other" or type is code 'x,' explain <input type="text"/>		D. Number of wells per type (If area permit) 1 well, type R	
XI. Location of Well(s) or Approximate Center of Field or Project					XII. Indian Lands (Mark 'x') <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Latitude Deg <input type="text"/> Min <input type="text"/> Sec <input type="text"/>	Longitude Deg <input type="text"/> Min <input type="text"/> Sec <input type="text"/>	Township and Range Sec <input type="text"/> Twp <input type="text"/> Range <input type="text"/> 8 <input type="text"/> SS <input type="text"/> 3W <input type="text"/> SW <input type="text"/>		Feet From <input type="text"/>	Line <input type="text"/> Feet From <input type="text"/> Line <input type="text"/>
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C. Signature 			D. Date Signed <input type="text"/> 07/27/2015		

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II. Owner Name and Address													
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Street Address 960 Broadway Ave. Suite 500 PO Box 70019				Phone Number (208) 685-7600		Street Address 960 Broadway Ave. Suite 500 PO Box 70019				Phone Number (208) 685-7600			
City Boise		State ID		ZIP CODE 83707		City Boise		State ID		ZIP CODE 83707			
IV. Commercial Facility			V. Ownership			VI. Legal Contact			VII. SIC Codes				
<input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No			<input checked="" type="checkbox"/> Private <input type="checkbox"/> Federal <input type="checkbox"/> Other			<input type="checkbox"/> Owner <input checked="" type="checkbox"/> Operator							
VIII. Well Status (Mark "x")													
<input checked="" type="checkbox"/> A Operating		Date Started mo day year			<input checked="" type="checkbox"/> B. Modification/Conversion			<input type="checkbox"/> C. Proposed					
IX. Type of Permit Requested (Mark "x" and specify if required)													
<input type="checkbox"/> A. Individual <input checked="" type="checkbox"/> B. Area			Number of Existing Wells 111			Number of Proposed Wells 1			Name(s) of field(s) or project(s) Antelope Creek Ute Tribal 09-01				
X. Class and Type of Well (see reverse)													
A. Class(es) (enter code(s)) II		B. Type(s) (enter code(s)) R		C. If class is "other" or type is code 'x,' explain					D. Number of wells per type (if area permit) 1 well, type R				
XI. Location of Well(s) or Approximate Center of Field or Project													
Latitude			Longitude			Township and Range						<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Deg <input type="text"/>	Min <input type="text"/>	Sec <input type="text"/>	Deg <input type="text"/>	Min <input type="text"/>	Sec <input type="text"/>	Sec <input type="text"/>	Twp <input type="text"/>	Range <input type="text"/>	1/4 Sec <input type="text"/>	Feet From <input type="text"/>	Line <input type="text"/>	Feet From <input type="text"/>	Line <input type="text"/>
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City Boise				State ID		ZIP CODE 83707			City Boise				State ID		ZIP CODE 83707		
IV. Commercial Facility				V. Ownership				VI. Legal Contact				VII. SIC Codes					
<input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No				<input checked="" type="checkbox"/> Private <input type="checkbox"/> Federal <input type="checkbox"/> Other				<input type="checkbox"/> Owner <input checked="" type="checkbox"/> Operator									
VIII. Well Status (Mark "x")																	
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IX. Type of Permit Requested (Mark "x" and specify if required)																	
<input type="checkbox"/> A. Individual <input checked="" type="checkbox"/> B. Area				Number of Existing Wells 111			Number of Proposed Wells 1			Name(s) of field(s) or project(s) Antelope Creek Ute Tribal 09-04							
X. Class and Type of Well (see reverse)																	
A. Class(es) (enter code(s)) II		B. Type(s) (enter code(s)) R		C. If class is "other" or type is code 'x,' explain 						D. Number of wells per type (if area permit) 1 well, type R							
XI. Location of Well(s) or Approximate Center of Field or Project																	
Latitude			Longitude			Township and Range										XII. Indian Lands (Mark 'x')	
Deg	Min	Sec	Deg	Min	Sec	Sec	Twp	Range	1/4 Sec	Feet From	Line	Feet From	Line	<input checked="" type="checkbox"/> Yes			
						9	SS	3W	NW					<input type="checkbox"/> No			
XIII. Attachments																	
(Complete the following questions on a separate sheet(s) and number accordingly; see instructions)																	
For Classes I, II, III, (and other classes) complete and submit on a separate sheet(s) Attachments A-U (pp 2-6) as appropriate. Attach maps where required. List attachments by letter which are applicable and are included with your application.																	
XIV. Certification																	
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A. Name and Title (Type or Print) Kevin Dickey, Vice President, Operations										B. Phone No. (Area Code and No.) (208) 685-7600							
C. Signature 										D. Date Signed 07/27/2015							



United States Environmental Protection Agency
**Underground Injection Control
 Permit Application**

(Collected under the authority of the Safe Drinking Water Act. Sections 1421, 1422, 40 CFR 144)

I. EPA ID Number		
U	T/A	C

**Read Attached Instructions Before Starting
 For Official Use Only**

Application approved mo day year	Date received mo day year	Permit Number	Well ID	FINDS Number

II. Owner Name and Address			III. Operator Name and Address		
Owner Name Petroglyph Energy, Inc.			Owner Name Petroglyph Energy, Inc.		
Street Address 960 Broadway Ave. Suite 500 PO Box 70019		Phone Number (208) 685-7600	Street Address 960 Broadway Ave. Suite 500 PO Box 70019		Phone Number (208) 685-7600
City Boise	State ID	ZIP CODE 83707	City Boise	State ID	ZIP CODE 83707
IV. Commercial Facility		V. Ownership		VI. Legal Contact	
<input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<input checked="" type="checkbox"/> Private <input type="checkbox"/> Federal <input type="checkbox"/> Other		<input type="checkbox"/> Owner <input checked="" type="checkbox"/> Operator	
VII. SIC Codes					

VIII. Well Status (Mark "x")			
<input checked="" type="checkbox"/> A <input type="checkbox"/> B Operating	Date Started mo day year 111	<input checked="" type="checkbox"/> B. Modification/Conversion 1	<input type="checkbox"/> C. Proposed Antelope Creek Ute Tribal 10-03

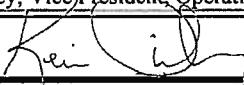
IX. Type of Permit Requested (Mark "x" and specify if required)					
<input type="checkbox"/> A. Individual <input checked="" type="checkbox"/> B. Area		Number of Existing Wells 111		Number of Proposed Wells 1	
Name(s) of field(s) or project(s) Antelope Creek Ute Tribal 10-03					

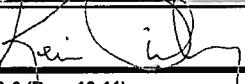
X. Class and Type of Well (see reverse)					
A. Class(es) (enter code(s)) II	B. Type(s) (enter code(s)) R	C. If class is "other" or type is code 'x,' explain 			D. Number of wells per type (if area permit) 1 well, type R

XI. Location of Well(s) or Approximate Center of Field or Project										XII. Indian Lands (Mark 'x')			
Latitude			Longitude			Township and Range							
Deg	Min	Sec	Deg	Min	Sec	Sec	Twp	Range	1/4 Sec	Feet From	Line	Feet From	Line
						10	SS	3W	NW				
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No													

XIII. Attachments <p>(Complete the following questions on a separate sheet(s) and number accordingly; see instructions)</p> <p>For Classes I, II, III, (and other classes) complete and submit on a separate sheet(s) Attachments A-U (pp 2-6) as appropriate. Attach maps where required. List attachments by letter which are applicable and are included with your application.</p>													
---	--	--	--	--	--	--	--	--	--	--	--	--	--

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A. Name and Title (Type or Print) Kevin Dickey, Vice-President, Operations							B. Phone No. (Area Code and No.) (208) 685-7600						
C. Signature 							D. Date Signed 07/27/2015						

United States Environmental Protection Agency Underground Injection Control Permit Application <i>(Collected under the authority of the Safe Drinking Water Act. Sections 1421, 1422, 40 CFR 144)</i>													
Read Attached Instructions Before Starting For Official Use Only													
Application approved mo day year			Date received mo day year			Permit Number		Well ID		FINDS Number			
II. Owner Name and Address						III. Operator Name and Address							
Owner Name Petroglyph Energy, Inc.						Owner Name Petroglyph Energy, Inc.							
Street Address 960 Broadway Ave. Suite 500 PO Box 70019				Phone Number (208) 685-7600		Street Address 960 Broadway Ave. Suite 500 PO Box 70019				Phone Number (208) 685-7600			
City Boise		State ID		ZIP CODE 83707		City Boise		State ID		ZIP CODE 83707			
IV. Commercial Facility			V. Ownership			VI. Legal Contact			VII. SIC Codes				
<input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No			<input checked="" type="checkbox"/> Private <input type="checkbox"/> Federal <input type="checkbox"/> Other			<input type="checkbox"/> Owner <input checked="" type="checkbox"/> Operator							
VIII. Well Status (Mark "x")													
<input checked="" type="checkbox"/> A Operating		Date Started mo day year			<input checked="" type="checkbox"/> B. Modification/Conversion			<input type="checkbox"/> C. Proposed					
IX. Type of Permit Requested (Mark "x" and specify if required)													
<input type="checkbox"/> A. Individual			<input checked="" type="checkbox"/> B. Area		Number of Existing Wells 111		Number of Proposed Wells 1		Name(s) of field(s) or project(s) Antelope Creek Ute Tribal 17-04				
X. Class and Type of Well (see reverse)													
A. Class(es) (enter code(s)) II		B. Type(s) (enter code(s)) R		C. If class is "other" or type is code 'x,' explain				D. Number of wells per type (if area permit) 1 well, type R					
XI. Location of Well(s) or Approximate Center of Field or Project													
Latitude			Longitude			Township and Range						<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Deg	Min	Sec	Deg	Min	Sec	Sec	Twp	Range	1/4 Sec	Feet From	Line	Feet From	Line
						17	5S	3W	NW				
XII. Indian Lands (Mark 'x')													
XIII. Attachments													
<i>(Complete the following questions on a separate sheet(s) and number accordingly; see instructions)</i> For Classes I, II, III, (and other classes) complete and submit on a separate sheet(s) Attachments A-U (pp 2-6) as appropriate. Attach maps where required. List attachments by letter which are applicable and are included with your application.													
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A. Name and Title (Type or Print) Kevin Dickey, Vice President, Operations						B. Phone No. (Area Code and No.) (208) 685-7600							
C. Signature 						D. Date Signed 07/27/2015							

United States Environmental Protection Agency Underground Injection Control Permit Application <i>(Collected under the authority of the Safe Drinking Water Act. Sections 1421, 1422, 40 CFR 144)</i>												I. EPA ID Number					
												T/A		C			
U																	
Read Attached Instructions Before Starting For Official Use Only																	
Application approved mo day year			Date received mo day year			Permit Number			Well ID			FINDS Number					
II. Owner Name and Address												III. Operator Name and Address					
Owner Name Petroglyph Energy, Inc.												Owner Name Petroglyph Energy, Inc.					
Street Address 960 Broadway Ave. Suite 500 PO Box 70019						Phone Number (208) 685-7600			Street Address 960 Broadway Ave. Suite 500 PO Box 70019						Phone Number (208) 685-7600		
City Boise			State ID		ZIP CODE 83707		City Boise			State ID		ZIP CODE 83707					
IV. Commercial Facility			V. Ownership			VI. Legal Contact			VII. SIC Codes								
<input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No			<input checked="" type="checkbox"/> Private <input type="checkbox"/> Federal <input type="checkbox"/> Other			<input type="checkbox"/> Owner <input checked="" type="checkbox"/> Operator											
VIII. Well Status (Mark "x")																	
<input checked="" type="checkbox"/> A Operating		Date Started mo day year			<input checked="" type="checkbox"/> B. Modification/Conversion			<input type="checkbox"/> C. Proposed									
IX. Type of Permit Requested (Mark "x" and specify if required)																	
<input type="checkbox"/> A. Individual <input checked="" type="checkbox"/> B. Area			Number of Existing Wells 111			Number of Proposed Wells 1			Name(s) of field(s) or project(s) Antelope Creek Ute Tribal 17-05								
X. Class and Type of Well (see reverse)																	
A. Class(es) (enter code(s))		B. Type(s) (enter code(s))		C. If class is "other" or type is code 'x,' explain					D. Number of wells per type (if area permit) 1 well, type R								
II		R															
XI. Location of Well(s) or Approximate Center of Field or Project												XII. Indian Lands (Mark 'x')					
Latitude			Longitude			Township and Range									<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
Deg	Min	Sec	Deg	Min	Sec	Sec	Twp	Range	1/4 Sec	Feet From	Line	Feet From	Line				
						17	5S	3W	NW								
XIII. Attachments																	
(Complete the following questions on a separate sheet(s) and number accordingly; see Instructions)																	
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A. Name and Title (Type or Print)												B. Phone No. (Area Code and No.)					
Kevin Dickey, Vice President, Operations												(208) 685-7600					
C. Signature												D. Date Signed					
												07/27/2015					



United States Environmental Protection Agency
**Underground Injection Control
 Permit Application**
(Collected under the authority of the Safe Drinking Water Act. Sections 1421, 1422, 40 CFR 144)

I. EPA ID Number

T/A	C
U	

**Read Attached Instructions Before Starting
 For Official Use Only**

Application approved mo day year	Date received mo day year	Permit Number	Well ID	FINDS Number

II. Owner Name and Address

III. Operator Name and Address

Owner Name
 Petroglyph Energy, Inc.

Owner Name
 Petroglyph Energy, Inc.

Street Address
 960 Broadway Ave. Suite 500 PO Box 70019

Phone Number
 (208) 685-7600

Street Address
 960 Broadway Ave. Suite 500 PO Box 70019

Phone Number
 (208) 685-7600

City
 Boise

State
 ID

ZIP CODE
 83707

City
 Boise

State
 ID

ZIP CODE
 83707

IV. Commercial Facility

V. Ownership

VI. Legal Contact

VII. SIC Codes

Yes
 No

Private
 Federal
 Other

Owner
 Operator

--	--	--

VIII. Well Status (Mark "x")

A
 Operating

Date Started
mo day year

B. Modification/Conversion

C. Proposed

IX. Type of Permit Requested (Mark "x" and specify if required)

A. Individual

B. Area

Number of Existing Wells

111

Number of Proposed Wells

1

Name(s) of field(s) or project(s)

Antelope Creek
 Ute Tribal 17-12

X. Class and Type of Well (see reverse)

A. Class(es)
 (enter code(s))

B. Type(s)
 (enter code(s))

C. If class is "other" or type is code 'x,' explain

D. Number of wells per type (if area permit)

1 well, type R

II

R

XI. Location of Well(s) or Approximate Center of Field or Project

XII. Indian Lands (Mark 'x')

Latitude			Longitude			Township and Range							
Deg	Min	Sec	Deg	Min	Sec	Sec	Twp	Range	1/4 Sec	Feet From	Line	Feet From	Line
						17	5S	3W	SW				

Yes
 No

XIII. Attachments

(Complete the following questions on a separate sheet(s) and number accordingly; see instructions)

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A. Name and Title (Type or Print)

Kevin Dickey, Vice President, Operations

B. Phone No. (Area Code and No.)

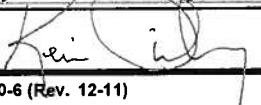
(208) 685-7600

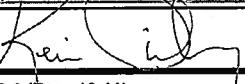
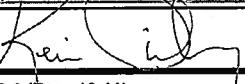
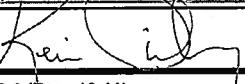
C. Signature

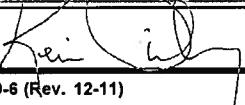
D. Date Signed

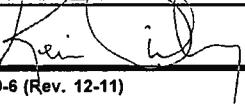
07/27/2015

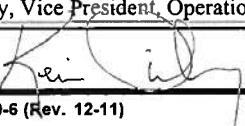
United States Environmental Protection Agency Underground Injection Control Permit Application <i>(Collected under the authority of the Safe Drinking Water Act. Sections 1421, 1422, 40 CFR 144)</i>												I. EPA ID Number 					
												T/A	C				
												U					
Read Attached Instructions Before Starting For Official Use Only																	
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II. Owner Name and Address												III. Operator Name and Address					
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City Boise			State ID			ZIP CODE 83707			City Boise			State ID			ZIP CODE 83707		
IV. Commercial Facility				V. Ownership				VI. Legal Contact				VII. SIC Codes					
<input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No				<input checked="" type="checkbox"/> Private <input type="checkbox"/> Federal <input type="checkbox"/> Other				<input type="checkbox"/> Owner <input checked="" type="checkbox"/> Operator									
VIII. Well Status (Mark "x")																	
<input checked="" type="checkbox"/> A Operating		Date Started mo day year			<input checked="" type="checkbox"/> B. Modification/Conversion						<input type="checkbox"/> C. Proposed						
IX. Type of Permit Requested (Mark "x" and specify if required)																	
<input type="checkbox"/> A. Individual <input checked="" type="checkbox"/> B. Area				Number of Existing Wells 111			Number of Proposed Wells 1			Name(s) of field(s) or project(s) Antelope Creek Ute Tribal 20-06							
X. Class and Type of Well (see reverse)																	
A. Class(es) (enter code(s))			B. Type(s) (enter code(s))			C. If class is "other" or type is code 'x,' explain II R						D. Number of wells per type (if area permit) 1 well, type R					
XI. Location of Well(s) or Approximate Center of Field or Project												XII. Indian Lands (Mark 'x')					
Latitude Deg Min Sec			Longitude Deg Min Sec			Township and Range Sec Twp Range 1/4 Sec									<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
20 5S 3W NW																	
XIII. Attachments <i>(Complete the following questions on a separate sheet(s) and number accordingly; see instructions)</i> For Classes I, II, III, (and other classes) complete and submit on a separate sheet(s) Attachments A-U (pp 2-6) as appropriate. Attach maps where required. List attachments by letter which are applicable and are included with your application.																	
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C. Signature 												D. Date Signed 07/27/2015					

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												T/A	C						
<i>Read Attached Instructions Before Starting For Official Use Only</i>																			
Application approved mo day year			Date received mo day year			Permit Number			Well ID			FINDS Number							
<input type="text"/>			<input type="text"/>			<input type="text"/>			<input type="text"/>			<input type="text"/>							
II. Owner Name and Address												III. Operator Name and Address							
Owner Name <input type="text"/> Petroglyph Energy, Inc.												Owner Name <input type="text"/> Petroglyph Energy, Inc.							
Street Address <input type="text"/> 960 Broadway Ave. Suite 500 PO Box 70019						Phone Number <input type="text"/> (208) 685-7600			Street Address <input type="text"/> 960 Broadway Ave. Suite 500 PO Box 70019						Phone Number <input type="text"/> (208) 685-7600				
City <input type="text"/> Boise			State <input type="text"/> ID			ZIP CODE <input type="text"/> 83707			City <input type="text"/> Boise			State <input type="text"/> ID			ZIP CODE <input type="text"/> 83707				
IV. Commercial Facility			V. Ownership			VI. Legal Contact			VII. SIC Codes										
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			<input checked="" type="checkbox"/> Private <input type="checkbox"/> Federal <input type="checkbox"/> Other			<input type="checkbox"/> Owner <input checked="" type="checkbox"/> Operator													
VIII. Well Status (Mark "x")																			
<input checked="" type="checkbox"/> A <input type="checkbox"/> Operating		Date Started mo day year			<input type="checkbox"/> B. Modification/Conversion			<input type="checkbox"/> C. Proposed											
		<input type="text"/>																	
IX. Type of Permit Requested (Mark "x" and specify if required)																			
<input type="checkbox"/> A. Individual <input checked="" type="checkbox"/> B. Area				Number of Existing Wells <input type="text"/> 111			Number of Proposed Wells <input type="text"/> 1			Name(s) of field(s) or project(s) <input type="text"/> Antelope Creek <input type="text"/> Ute Tribal 20-07									
X. Class and Type of Well (see reverse)																			
A. Class(es) (enter code(s))		B. Type(s) (enter code(s))		C. If class is "other" or type is code 'x,' explain <input type="text"/>								D. Number of wells per type (if area permit) <input type="text"/> 1 well, type R							
<input type="text"/> II		<input type="text"/> R																	
XI. Location of Well(s) or Approximate Center of Field or Project												XII. Indian Lands (Mark 'x')							
Latitude			Longitude			Township and Range												<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Deg <input type="text"/>	Min <input type="text"/>	Sec <input type="text"/>	Deg <input type="text"/>	Min <input type="text"/>	Sec <input type="text"/>	Sec <input type="text"/> 20	Twp <input type="text"/> SS	Range <input type="text"/> 3W	1/4 Sec <input type="text"/> NE	Feet From <input type="text"/>	Line <input type="text"/>	Feet From <input type="text"/>	Line <input type="text"/>						
XIII. Attachments																			
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C. Signature 												D. Date Signed <input type="text"/> 07/27/2015							

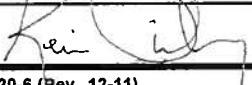
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Read Attached Instructions Before Starting For Official Use Only															
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Owner Name Petroglyph Energy, Inc.						Owner Name Petroglyph Energy, Inc.									
Street Address 960 Broadway Ave. Suite 500 PO Box 70019				Phone Number (208) 685-7600		Street Address 960 Broadway Ave. Suite 500 PO Box 70019				Phone Number (208) 685-7600					
City Boise		State ID		ZIP CODE 83707		City Boise		State ID		ZIP CODE 83707					
IV. Commercial Facility			V. Ownership			VI. Legal Contact			VII. SIC Codes						
<input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No			<input checked="" type="checkbox"/> Private <input type="checkbox"/> Federal <input type="checkbox"/> Other			<input type="checkbox"/> Owner <input checked="" type="checkbox"/> Operator									
VIII. Well Status (Mark "x")															
<input checked="" type="checkbox"/> A Operating		Date Started mo day year			<input checked="" type="checkbox"/> B. Modification/Conversion			<input type="checkbox"/> C. Proposed							
IX. Type of Permit Requested (Mark "x" and specify if required)															
<input type="checkbox"/> A. Individual <input checked="" type="checkbox"/> B. Area			Number of Existing Wells 111			Number of Proposed Wells 1			Name(s) of field(s) or project(s) Antelope Creek Ute Tribal 20-11						
X. Class and Type of Well (see reverse)															
A. Class(es) (enter code(s))		B. Type(s) (enter code(s))		C. If class is "other" or type is code 'x,' explain				D. Number of wells per type (if area permit) 1 well, type R							
II		R													
XI. Location of Well(s) or Approximate Center of Field or Project															
Latitude			Longitude			Township and Range							<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
Deg	Min	Sec	Deg	Min	Sec	Sec	Twp	Range	1/4 Sec	Feet From	Line	Feet From	Line		
						20	SS	3W	SW						
XII. Indian Lands (Mark 'x')															
XIII. Attachments															
<p><i>(Complete the following questions on a separate sheet(s) and number accordingly; see instructions)</i></p> <p>For Classes I, II, III, (and other classes) complete and submit on a separate sheet(s) Attachments A-U (pp 2-6) as appropriate. Attach maps where required. List attachments by letter which are applicable and are included with your application.</p>															
XIV. Certification															
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<table border="1" style="width: 100%;"> <tr> <td>A. Name and Title (Type or Print) Kevin Dickey, Vice President, Operations</td> <td>B. Phone No. (Area Code and No.) (208) 685-7600</td> </tr> <tr> <td>C. Signature </td> <td>D. Date Signed 07/27/2015</td> </tr> </table>												A. Name and Title (Type or Print) Kevin Dickey, Vice President, Operations	B. Phone No. (Area Code and No.) (208) 685-7600	C. Signature 	D. Date Signed 07/27/2015
A. Name and Title (Type or Print) Kevin Dickey, Vice President, Operations	B. Phone No. (Area Code and No.) (208) 685-7600														
C. Signature 	D. Date Signed 07/27/2015														

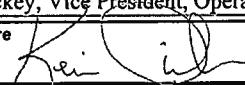
United States Environmental Protection Agency Underground Injection Control Permit Application <i>(Collected under the authority of the Safe Drinking Water Act. Sections 1421, 1422, 40 CFR 144)</i>											
Read Attached Instructions Before Starting For Official Use Only											
Application approved mo day year			Date received mo day year			Permit Number		Well ID		FINDS Number	
II. Owner Name and Address											
Owner Name Petroglyph Energy, Inc.						III. Operator Name and Address					
Street Address 960 Broadway Ave. Suite 500 PO Box 70019				Phone Number (208) 685-7600		Street Address 960 Broadway Ave. Suite 500 PO Box 70019				Phone Number (208) 685-7600	
City Boise			State ID	ZIP CODE 83707		City Boise			State ID	ZIP CODE 83707	
IV. Commercial Facility			V. Ownership			VI. Legal Contact			VII. SIC Codes		
<input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No			<input checked="" type="checkbox"/> Private <input type="checkbox"/> Federal <input type="checkbox"/> Other			<input type="checkbox"/> Owner <input checked="" type="checkbox"/> Operator					
VIII. Well Status (Mark "x")											
<input checked="" type="checkbox"/> A <small>Operating</small>		Date Started mo day year			<input checked="" type="checkbox"/> B. Modification/Conversion			<input type="checkbox"/> C. Proposed			
IX. Type of Permit Requested (Mark "x" and specify if required)											
<input type="checkbox"/> A. Individual <input checked="" type="checkbox"/> B. Area				Number of Existing Wells 111		Number of Proposed Wells 1		Name(s) of field(s) or project(s) Antelope Creek Ute Tribal 20-15			
X. Class and Type of Well (see reverse)											
A. Class(es) (enter code(s)) II		B. Type(s) (enter code(s)) R		C. If class is "other" or type is code 'x,' explain				D. Number of wells per type (if area permit) 1 well, type R			
XI. Location of Well(s) or Approximate Center of Field or Project											
Latitude			Longitude			Township and Range					
Deg	Min	Sec	Deg	Min	Sec	Sec	Twp	Range	1/4 Sec	Feet From	Line
						20	SS	3W	SE		
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No											
XIII. Attachments											
<i>(Complete the following questions on a separate sheet(s) and number accordingly; see instructions)</i> For Classes I, II, III, (and other classes) complete and submit on a separate sheet(s) Attachments A--U (pp 2-6) as appropriate. Attach maps where required. List attachments by letter which are applicable and are included with your application.											
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C. Signature 						D. Date Signed 07/27/2015					

United States Environmental Protection Agency Underground Injection Control Permit Application <i>(Collected under the authority of the Safe Drinking Water Act. Sections 1421, 1422, 40 CFR 144)</i>												I. EPA ID Number			
												T/A		C	
												U			
Read Attached Instructions Before Starting For Official Use Only															
Application approved mo day year			Date received mo day year			Permit Number			Well ID			FINDS Number			
II. Owner Name and Address												III. Operator Name and Address			
Owner Name <input type="text" value="Petroglyph Energy, Inc."/>												Owner Name <input type="text" value="Petroglyph Energy, Inc."/>			
Street Address <input type="text" value="960 Broadway Ave. Suite 500 PO Box 70019"/>				Phone Number <input type="text" value="(208) 685-7600"/>			Street Address <input type="text" value="960 Broadway Ave. Suite 500 PO Box 70019"/>				Phone Number <input type="text" value="(208) 685-7600"/>				
City <input type="text" value="Boise"/>			State <input type="text" value="ID"/>		ZIP CODE <input type="text" value="83707"/>		City <input type="text" value="Boise"/>			State <input type="text" value="ID"/>		ZIP CODE <input type="text" value="83707"/>			
IV. Commercial Facility			V. Ownership			VI. Legal Contact			VII. SIC Codes						
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			<input checked="" type="checkbox"/> Private <input type="checkbox"/> Federal <input type="checkbox"/> Other			<input type="checkbox"/> Owner <input checked="" type="checkbox"/> Operator									
VIII. Well Status (Mark "x")															
<input checked="" type="checkbox"/> A Operating		Date Started mo day year <input type="text"/>			<input checked="" type="checkbox"/> B. Modification/Conversion			<input type="checkbox"/> C. Proposed							
IX. Type of Permit Requested (Mark "x" and specify if required)															
<input type="checkbox"/> A. Individual <input checked="" type="checkbox"/> B. Area				Number of Existing Wells <input type="text" value="111"/>			Number of Proposed Wells <input type="text" value="1"/>			Name(s) of field(s) or project(s) <input type="text" value="Antelope Creek Ute Tribal 31-03"/>					
X. Class and Type of Well (see reverse)															
A. Class(es) (enter code(s))		B. Type(s) (enter code(s))		C. If class is "other" or type is code 'x,' explain <input type="text"/>					D. Number of wells per type (if area permit) <input type="text" value="1 well, type R"/>						
<input type="text" value="II"/>		<input type="text" value="R"/>													
XI. Location of Well(s) or Approximate Center of Field or Project												XII. Indian Lands (Mark 'x')			
Latitude <input type="text"/> Deg <input type="text"/> Min <input type="text"/> Sec			Longitude <input type="text"/> Deg <input type="text"/> Min <input type="text"/> Sec			Township and Range <input type="text"/> Sec <input type="text"/> Twp <input type="text"/> Range <input type="text"/> 31 <input type="text"/> SS <input type="text"/> 3W			<input type="text"/> 1/4 Sec <input type="text"/> Feet From <input type="text"/> Line <input type="text"/> NW <input type="text"/> <input type="text"/> Line			<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
XIII. Attachments															
<p><i>(Complete the following questions on a separate sheet(s) and number accordingly; see instructions)</i></p> <p>For Classes I, II, III, (and other classes) complete and submit on a separate sheet(s) Attachments A-U (pp 2-6) as appropriate. Attach maps where required. List attachments by letter which are applicable and are included with your application.</p>															
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A. Name and Title (Type or Print) <input type="text" value="Kevin Dickey, Vice President, Operations"/>												B. Phone No. (Area Code and No.) <input type="text" value="(208) 685-7600"/>			
C. Signature 												D. Date Signed <input type="text" value="07/27/2015"/>			

United States Environmental Protection Agency Underground Injection Control Permit Application <i>(Collected under the authority of the Safe Drinking Water Act. Sections 1421, 1422, 40 CFR 144)</i>												I. EPA ID Number					
												T/A		C			
U																	
<i>Read Attached Instructions Before Starting For Official Use Only</i>																	
Application approved mo day year			Date received mo day year			Permit Number			Well ID			FINDS Number					
II. Owner Name and Address												III. Operator Name and Address					
Owner Name Petroglyph Energy, Inc.												Owner Name Petroglyph Energy, Inc.					
Street Address 960 Broadway Ave. Suite 500 PO Box 70019						Phone Number (208) 685-7600			Street Address 960 Broadway Ave. Suite 500 PO Box 70019						Phone Number (208) 685-7600		
City Boise			State ID		ZIP CODE 83707		City Boise			State ID		ZIP CODE 83707					
IV. Commercial Facility			V. Ownership			VI. Legal Contact			VII. SIC Codes								
<input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No			<input checked="" type="checkbox"/> Private <input type="checkbox"/> Federal <input type="checkbox"/> Other			<input type="checkbox"/> Owner <input checked="" type="checkbox"/> Operator											
VIII. Well Status (Mark "x")																	
<input checked="" type="checkbox"/> A Operating		Date Started mo day year 			<input checked="" type="checkbox"/> B. Modification/Conversion			<input type="checkbox"/> C. Proposed									
IX. Type of Permit Requested (Mark "x" and specify if required)																	
<input type="checkbox"/> A. Individual <input checked="" type="checkbox"/> B. Area				Number of Existing Wells 111			Number of Proposed Wells 1			Name(s) of field(s) or project(s) Antelope Creek Ute Tribal 31-05							
X. Class and Type of Well (see reverse)																	
A. Class(es) (enter code(s))		B. Type(s) (enter code(s))		C. If class is "other" or type is code 'x,' explain 						D. Number of wells per type (if area permit) 1 well, type R							
II		R															
XI. Location of Well(s) or Approximate Center of Field or Project												XII. Indian Lands (Mark 'x')					
Latitude Deg Min Sec			Longitude Deg Min Sec			Township and Range Sec Twp Range 1/4 Sec 31 5S 3W NW									<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
XIII. Attachments																	
<i>(Complete the following questions on a separate sheet(s) and number accordingly; see instructions)</i> For Classes I, II, III, (and other classes) complete and submit on a separate sheet(s) Attachments A--U (pp 2-6) as appropriate. Attach maps where required. List attachments by letter which are applicable and are included with your application.																	
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C. Signature 												D. Date Signed 07/27/2015					

United States Environmental Protection Agency Underground Injection Control Permit Application <i>(Collected under the authority of the Safe Drinking Water Act. Sections 1421, 1422, 40 CFR 144)</i>												I. EPA ID Number U		T/A	C	
Read Attached Instructions Before Starting For Official Use Only																
Application approved mo day year			Date received mo day year			Permit Number			Well ID			FINDS Number				
<input type="text"/>			<input type="text"/>			<input type="text"/>			<input type="text"/>			<input type="text"/>				
II. Owner Name and Address							III. Operator Name and Address									
Owner Name <input type="text"/> Petroglyph Energy, Inc.							Owner Name <input type="text"/> Petroglyph Energy, Inc.									
Street Address <input type="text"/> 960 Broadway Ave. Suite 500 PO Box 70019				Phone Number <input type="text"/> (208) 685-7600			Street Address <input type="text"/> 960 Broadway Ave. Suite 500 PO Box 70019				Phone Number <input type="text"/> (208) 685-7600					
City <input type="text"/> Boise			State <input type="text"/> ID		ZIP CODE <input type="text"/> 83707		City <input type="text"/> Boise			State <input type="text"/> ID		ZIP CODE <input type="text"/> 83707				
IV. Commercial Facility			V. Ownership				VI. Legal Contact			VII. SIC Codes						
<input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No			<input checked="" type="checkbox"/> Private <input type="checkbox"/> Federal <input type="checkbox"/> Other				<input type="checkbox"/> Owner <input checked="" type="checkbox"/> Operator			<input type="text"/>						
VIII. Well Status (Mark "x")																
<input checked="" type="checkbox"/> A <input type="checkbox"/> Operating		Date Started mo day year <input type="text"/>			<input checked="" type="checkbox"/> B. Modification/Conversion			<input type="checkbox"/> C. Proposed								
IX. Type of Permit Requested (Mark "x" and specify if required)																
<input type="checkbox"/> A. Individual <input checked="" type="checkbox"/> B. Area				Number of Existing Wells <input type="text"/> 111			Number of Proposed Wells <input type="text"/> 1			Name(s) of field(s) or project(s) <input type="text"/> Antelope Creek <input type="text"/> Ute Tribal 31-07						
X. Class and Type of Well (see reverse)																
A. Class(es) (enter code(s))		B. Type(s) (enter code(s))		C. If class is "other" or type is code 'x,' explain <input type="text"/>							D. Number of wells per type (if area permit) <input type="text"/> 1 well, type R					
<input type="text"/> II		<input type="text"/> R		<input type="text"/>							<input type="text"/>					
XI. Location of Well(s) or Approximate Center of Field or Project												XII. Indian Lands (Mark 'x')				
Latitude			Longitude			Township and Range						<input checked="" type="checkbox"/> Yes				
Deg <input type="text"/>	Min <input type="text"/>	Sec <input type="text"/>	Deg <input type="text"/>	Min <input type="text"/>	Sec <input type="text"/>	Sec <input type="text"/> 31	Twp <input type="text"/> 5S	Range <input type="text"/> 3W	1/4 Sec <input type="text"/> NE	Feet From <input type="text"/>	Line <input type="text"/>	Feet From <input type="text"/>	Line <input type="text"/>	<input type="checkbox"/> No		
XIII. Attachments																
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<p>C. Signature</p> 												<p>D. Date Signed</p> <input type="text"/> 07/27/2015				

United States Environmental Protection Agency Underground Injection Control Permit Application <i>(Collected under the authority of the Safe Drinking Water Act. Sections 1421, 1422, 40 CFR 144)</i>												I. EPA ID Number U	T/A	C			
<i>Read Attached Instructions Before Starting For Official Use Only</i>																	
Application approved mo day year			Date received mo day year			Permit Number			Well ID			FINDS Number					
II. Owner Name and Address												III. Operator Name and Address					
Owner Name Petroglyph Energy, Inc.												Owner Name Petroglyph Energy, Inc.					
Street Address 960 Broadway Ave. Suite 500 PO Box 70019						Phone Number (208) 685-7600			Street Address 960 Broadway Ave. Suite 500 PO Box 70019						Phone Number (208) 685-7600		
City Boise			State ID		ZIP CODE 83707		City Boise			State ID		ZIP CODE 83707					
IV. Commercial Facility			V. Ownership			VI. Legal Contact			VII. SIC Codes								
<input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No			<input checked="" type="checkbox"/> Private <input type="checkbox"/> Federal <input type="checkbox"/> Other			<input type="checkbox"/> Owner <input checked="" type="checkbox"/> Operator											
VIII. Well Status (Mark "x")																	
<input checked="" type="checkbox"/> A Operating		Date Started mo day year			<input checked="" type="checkbox"/> B. Modification/Conversion			<input type="checkbox"/> C. Proposed									
IX. Type of Permit Requested (Mark "x" and specify if required)																	
<input type="checkbox"/> A. Individual <input checked="" type="checkbox"/> B. Area				Number of Existing Wells 111			Number of Proposed Wells 1			Name(s) of field(s) or project(s) Antelope Creek Ute Tribal 31-12							
X. Class and Type of Well (see reverse)																	
A. Class(es) (enter code(s))		B. Type(s) (enter code(s))		C. If class is "other" or type is code 'x,' explain					D. Number of wells per type (if area permit) 1 well, type R								
II		R															
XI. Location of Well(s) or Approximate Center of Field or Project												XII. Indian Lands (Mark 'x')					
Latitude			Longitude			Township and Range									<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
Deg	Min	Sec	Deg	Min	Sec	Sec	Twp	Range	1/4 Sec	Feet From	Line	Feet From	Line				
						31	5S	3W	SW								
XIII. Attachments																	
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A. Name and Title (Type or Print)												B. Phone No. (Area Code and No.)					
Kevin Dickey, Vice President, Operations												<input type="text" value="Area Code and No."/> <input type="text" value="208 685-7600"/>					
C. Signature												D. Date Signed					
												<input type="text" value="07/27/2015"/>					

United States Environmental Protection Agency Underground Injection Control Permit Application <i>(Collected under the authority of the Safe Drinking Water Act. Sections 1421, 1422, 40 CFR 144)</i>												I. EPA ID Number				
												T/A	C			
												U				
Read Attached Instructions Before Starting For Official Use Only																
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II. Owner Name and Address										III. Operator Name and Address						
Owner Name Petroglyph Energy, Inc.										Owner Name Petroglyph Energy, Inc.						
Street Address 960 Broadway Ave. Suite 500 PO Box 70019					Phone Number (208) 685-7600		Street Address 960 Broadway Ave. Suite 500 PO Box 70019					Phone Number (208) 685-7600				
City Boise			State ID		ZIP CODE 83707		City Boise			State ID		ZIP CODE 83707				
IV. Commercial Facility			V. Ownership			VI. Legal Contact			VII. SIC Codes							
<input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No			<input checked="" type="checkbox"/> Private <input type="checkbox"/> Federal <input type="checkbox"/> Other			<input type="checkbox"/> Owner <input checked="" type="checkbox"/> Operator										
VIII. Well Status (Mark "x")																
<input checked="" type="checkbox"/> A Operating		Date Started mo day year			<input checked="" type="checkbox"/> B. Modification/Conversion			<input type="checkbox"/> C. Proposed								
IX. Type of Permit Requested (Mark "x" and specify if required)																
<input type="checkbox"/> A. Individual <input checked="" type="checkbox"/> B. Area				Number of Existing Wells 111			Number of Proposed Wells 1			Name(s) of field(s) or project(s) Antelope Creek Ute Tribal 36-08-E4						
X. Class and Type of Well (see reverse)																
A. Class(es) (enter code(s))		B. Type(s) (enter code(s))		C. If class is "other" or type is code 'x,' explain						D. Number of wells per type (if area permit) 1 well, type R						
II		R														
XI. Location of Well(s) or Approximate Center of Field or Project																
Latitude			Longitude			Township and Range										<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Deg	Min	Sec	Deg	Min	Sec	Sec	Twp	Range	1/4 Sec	Feet From	Line	Feet From	Line			
						36	5S	4W	NE							
XII. Indian Lands (Mark 'x')																
XIII. Attachments																
(Complete the following questions on a separate sheet(s) and number accordingly; see instructions)																
For Classes I, II, III, (and other classes) complete and submit on a separate sheet(s) Attachments A--U (pp 2-6) as appropriate. Attach maps where required. List attachments by letter which are applicable and are included with your application.																
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B. Phone No. (Area Code and No.) (208) 685-7600																
C. Signature 																
D. Date Signed 07/27/2015																

ATTACHMENT NO. 10

WELL BORE DIAGRAMS FOR THE UIC WELL

Ute Tribal 20-07 Well History

Well History:

Spud Well: 3/22/1984
 Completed: 6/8/1984
 First Production: 6/8/1984

Tops (KB):

BMSW* Found at 1418'

Green River 1505'

A Marker 4058'

X Marker 4542'

Douglas Creek 4684'

B Limestone 5065'

Castle Peak 5571'

Basal Carbonate 6042'

Perf History

5/30/1984

E01.2	5684' to 5688'
E01.2	5697' to 5703'
E03.3	5775' to 5779'
E04.2	5827' to 5831'
E05.1	5851' to 5853'

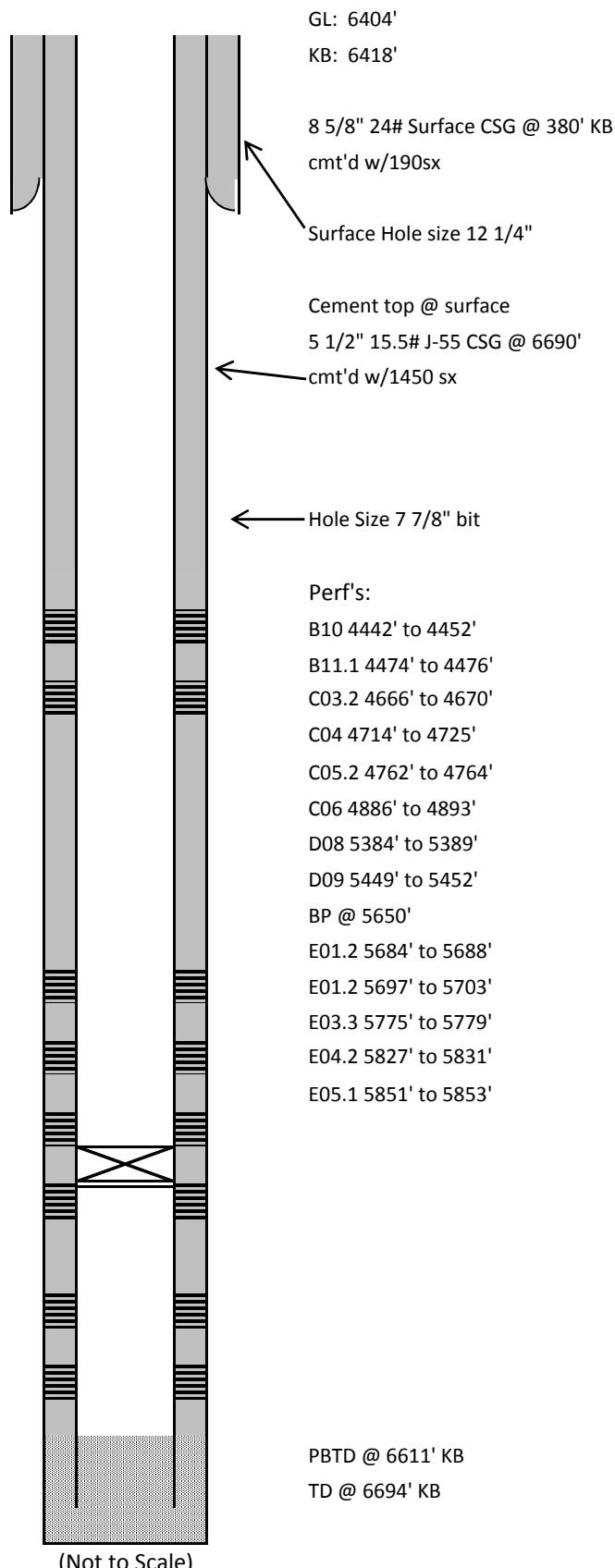
1/6/2011

B10	4442' to 4452'
B11.1	4474' to 4476'
C03.2	4666' to 4670'
C04	4714' to 4725'
C05.2	4762' to 4764'
C06	4886' to 4893'
D08	5384' to 5389'
D09	5449' to 5452'
BP	at 5650'

Petroglyph Operating Co., Inc.

Ute Tribal #20-07
 (1980' FNL & 1980' FEL)
 SW NE Section 20, 5S- 3W
 Antelope Creek Field
 Duchesne Co. Utah
 API#: 43013308820000

*Plate 1 Utah Geological Survey Special Study 144.
 (2012). BMSW Elevation Contour Map, Uinta Basin,
 Utah. [map]. (CA 1:200,000)



Ute Tribal 20-07 Well History

Well History:

Spud Well: 3/22/1984
 Completed: 6/8/1984
 First Production: 6/8/1984

Tops (KB):

BMSW* Found at 1418'

Green River 1505'

A Marker 4058'

X Marker 4542'

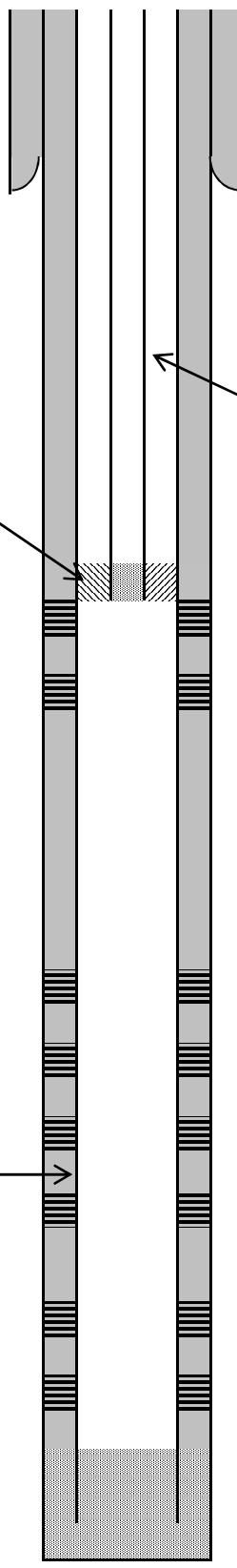
Douglas Creek 4684'

B Limestone 5065'

Castle Peak 5571'

Basal Carbonate 6042'

Injection packer @ 4352'



GL: 6404'

KB: 6418'

8 5/8" 24# Surface CSG @ 380' KB
 cmt'd w/190sx

Surface Hole size 12 1/4"

Cement top @ surface

5 1/2" 15.5# J-55 CSG @ 6690'
 cmt'd w/1450 sx

Tubing 2 7/8" 6.5# J55

Hole Size 7 7/8" bit

Perf's:

B10 4442' to 4452'
 B11.1 4474' to 4476'
 C03.2 4666' to 4670'
 C04 4714' to 4725'
 C05.2 4762' to 4764'
 C06 4886' to 4893'
 D08 5384' to 5389'
 D09 5449' to 5452'
 E01.2 5684' to 5688'
 E01.2 5697' to 5703'
 E03.3 5775' to 5779'
 E04.2 5827' to 5831'
 E05.1 5851' to 5853'

Remove BP @ 5650'

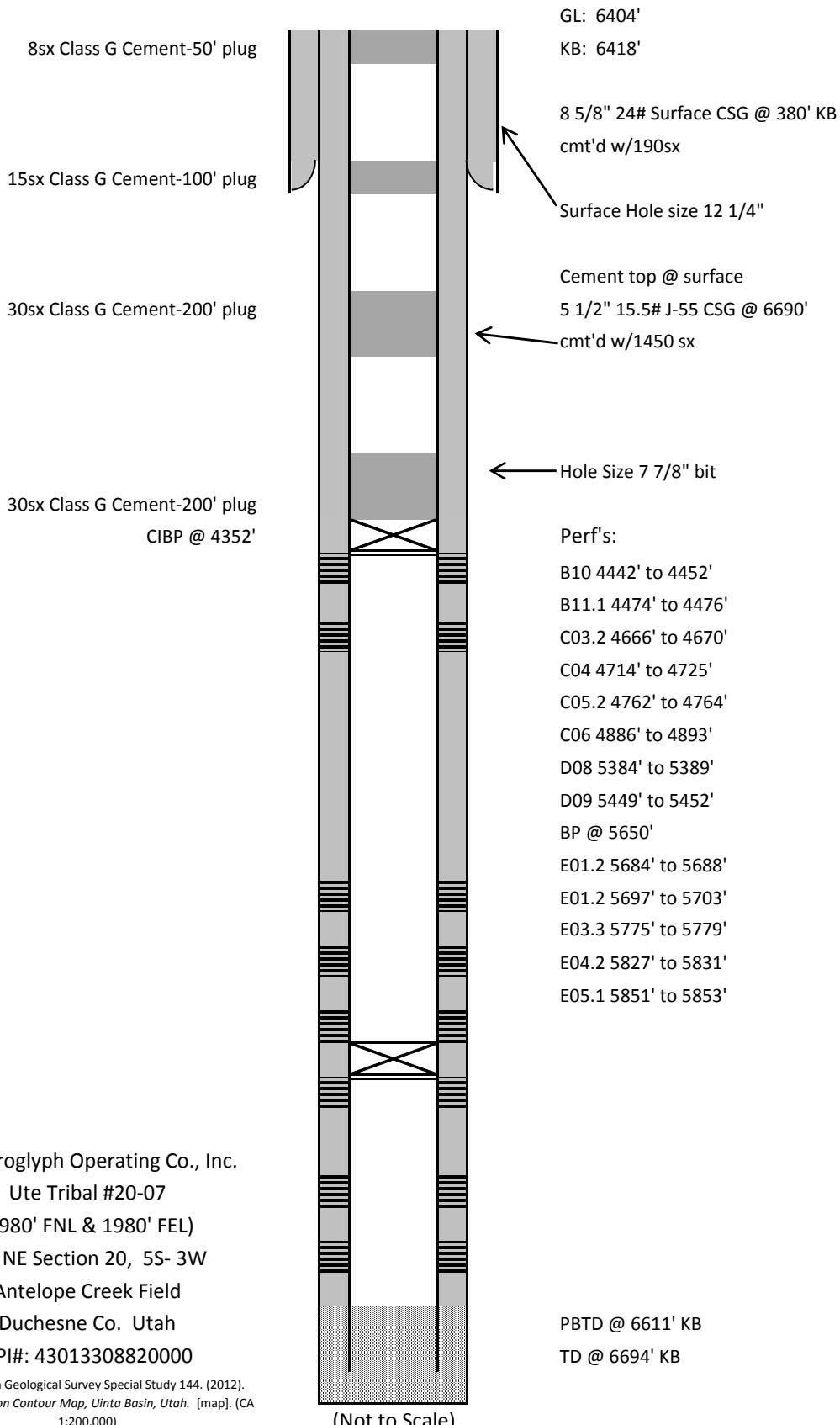
Petroglyph Operating Co., Inc.
 Ute Tribal #20-07
 (1980' FNL & 1980' FEL)
 SW NE Section 20, 5S- 3W
 Antelope Creek Field
 Duchesne Co. Utah
 API#: 43013308820000

PBTD @ 6611' KB

TD @ 6694' KB

*Plate 1 Utah Geological Survey Special Study 144.
 (2012). BMSW Elevation Contour Map, Uinta Basin,
 Utah. [map]. (CA 1:200,000)

Ute Tribal 20-07 Well History



*Plate 1 Utah Geological Survey Special Study 144. (2012).
BMSW Elevation Contour Map, Uinta Basin, Utah. [map]. (CA
 1:200,000)

ATTACHMENT NO. 11

P&A PROCEDURE

Plug and Abandonment Procedure

Ute Tribal 20-07

43-013-30882

1. Obtain authorization from regulatory agencies for P&A procedures.
2. Set deadman. Rig up pulling unit. Rig down wellhead. Install BOP. Release packer. Trip out of hole with tubing and packer.
3. RIH Set CIBP @ 4352'.
4. Trip in hole with tubing. Establish pump rate, spot 30sxs Class G cement on top of CIBP. This will be a 200' plug.
5. Raise the tubing to 1985' and set balanced 200' cement plug using 30sxs of Class G cement.
6. Raise the tubing to 380' and set balanced 100' cement plug using 15sxs of Class G cement.
7. Set balanced 50' cement plug (8sxs of Class G cement) from 50' to surface.
8. Cut off wellhead. Install plate and identification P&A post marker. Weld to casing.
9. File reports with the agencies and reclaim surface locations.

ATTACHMENT NO. 12

MIT PROCEDURE

Mechanical Integrity Test Procedure

Ute Tribal 20-07

43-013-30882

Integrity testing can be accomplished by pressuring up the annulus between the casing and the tubing. The pressure and duration of the test will be as required by the EPA.

Test Procedure Details:

1. Two weeks prior, notify EPA of pending work. Shut well in.
2. Record fluid level with echometer.
3. MIRU Service Unit.
4. POOH laying down rods and pump.
5. ND Wellhead. NU BOPs. POOH laying down 2 7/8" tubing.
6. PU plug and packer and new tubing. RIH and breakdown perfs.
7. POOH. RIH with injection packer to 4352'.
8. Reverse circulate in packer fluid.
9. Set packer and ND BOPs and NU wellhead.
10. Pressure test casing-tubing annulus to 1500psi for 15 minutes.
11. RDMO.
12. Notify EPA of test, wait for approval.
13. Return to injection.

ATTACHMENT NO. 13

SURETY BOND LETTER

**SURETY BOND STATEMENT**

July 27, 2015

Petroglyph currently operates 111 injection wells in Antelope Creek Field under EPA UIC Area Permit UT2736-00000. The existing wells are covered by UIC Bond No. LPM 4138351.

Prior to final permit approval, Petroglyph will add a rider to the existing bond to include this well along with the other wells being submitted to EPA at this time.

Kevin Dickey

V.P., Operations

Petroglyph Energy, Inc.

PETROGLYPH OPERATING COMPANY, INC.